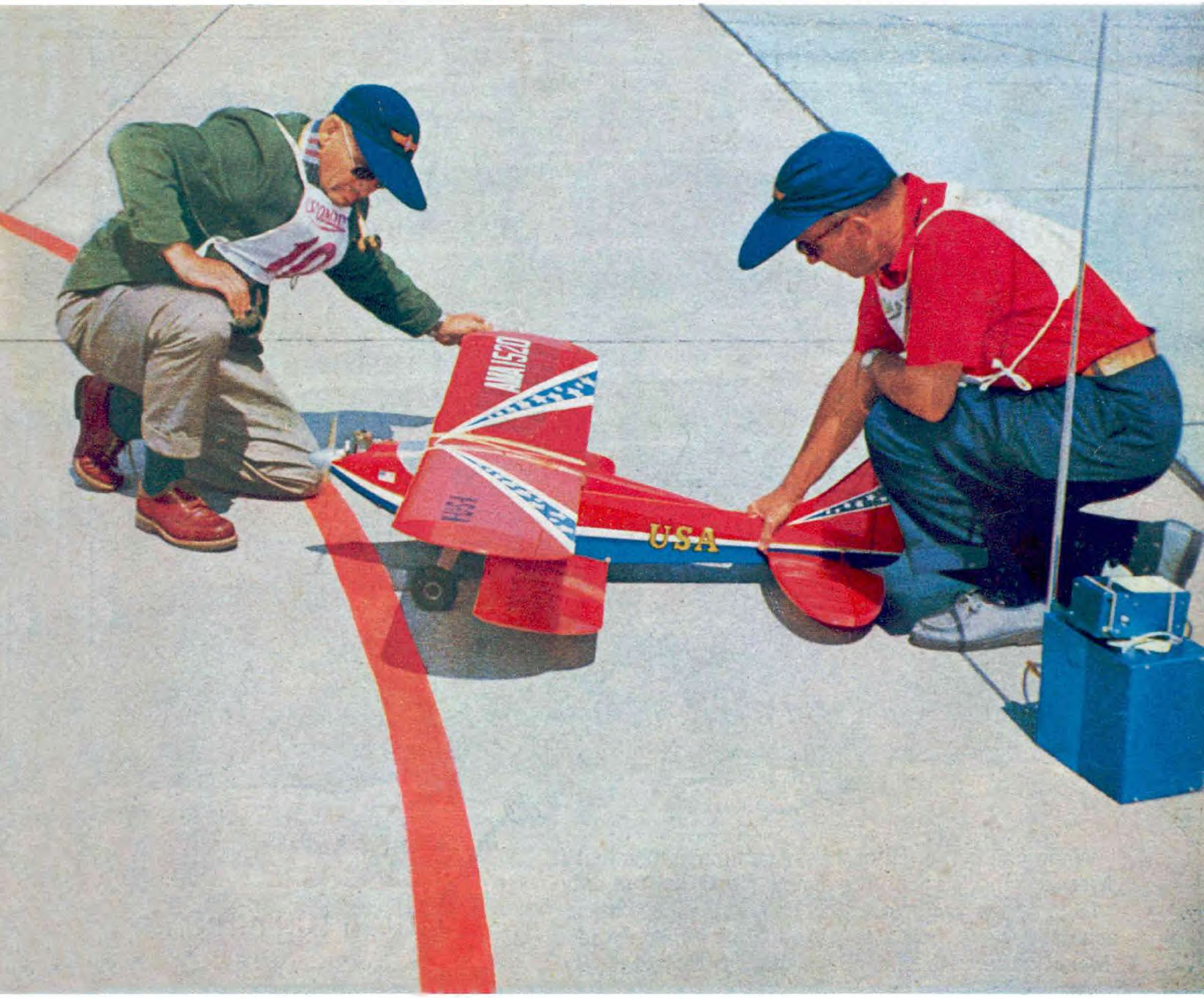
Aeromodelling - your first flight

meccano magazine

June

1s.3d.



the practical boy's hobbies magazine

1964

IN THIS ISSUE

- Make your own telephone
- British Railways' great leap forward

MECCANO

the toy
that grows with
the boy!



When children are 6 or 7 they can make their first Meccano models with the simple No. 0 outfit at only 13/3. As the years pass they can add larger outfits, accessories and motors to make more intricate models. Meccano builders can copy almost anything made by engineers—there's no limit to the sturdy working models that can be constructed.
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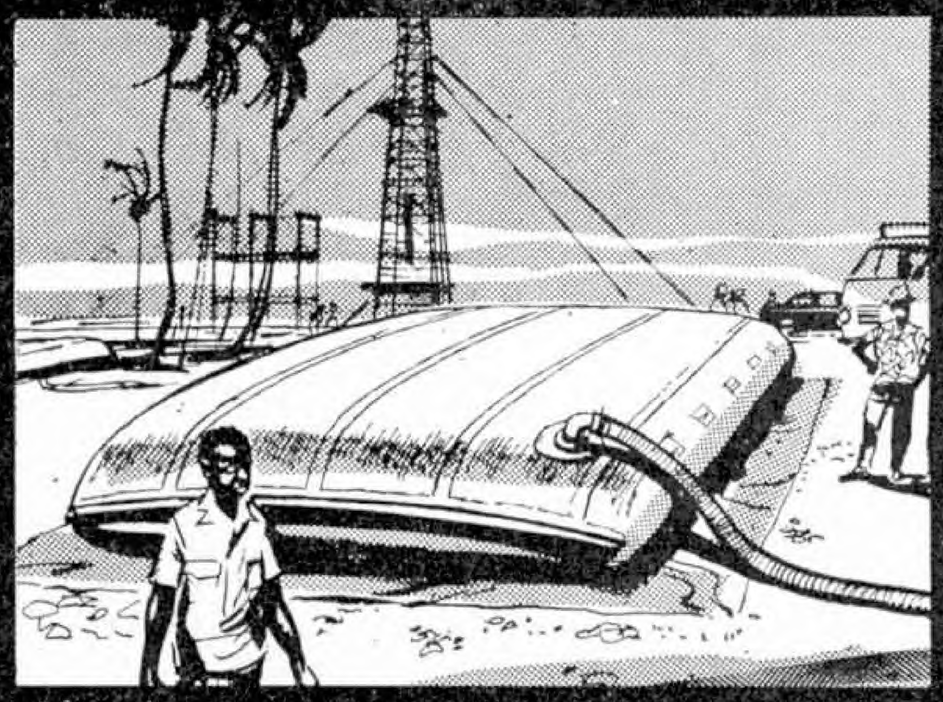
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well! WHAT D'YOU KNOW...



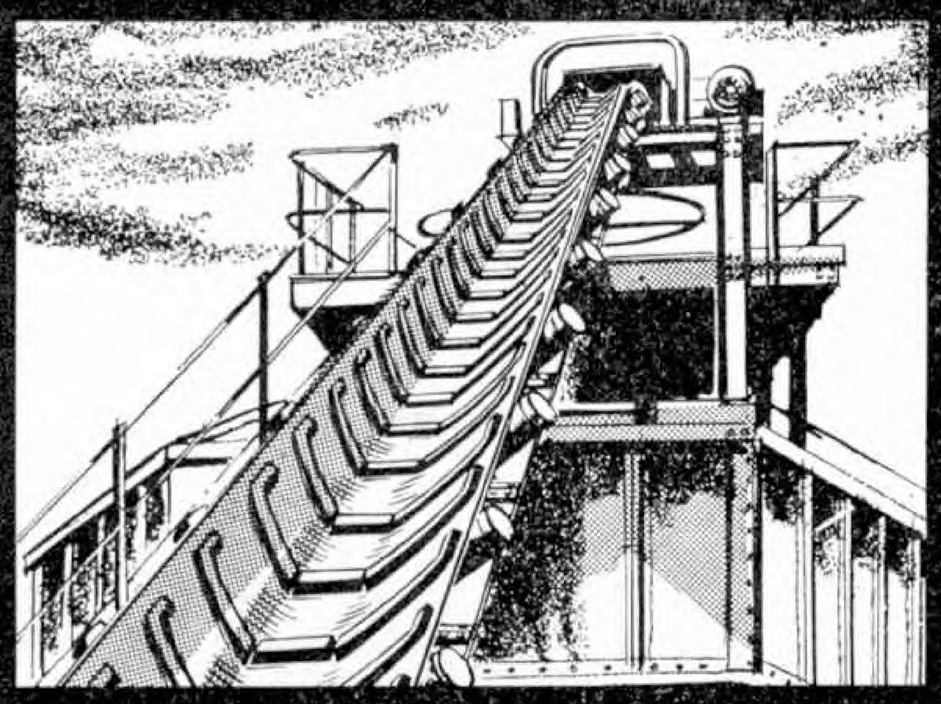
CARS ON WATER-SKIS!

When cars travel fast on wet roads, a 'wedge' of water builds up in front of the tyres and forces its way beneath them. Under certain conditions this can cause some tyres, particularly when worn, to lose contact with the road. To prevent this dangerous 'aqua-planing' Dunlop developed for the C.41 tyre a special tread which breaks through the water film so that the Dunlop 'road-hug' rubber can grip the road.



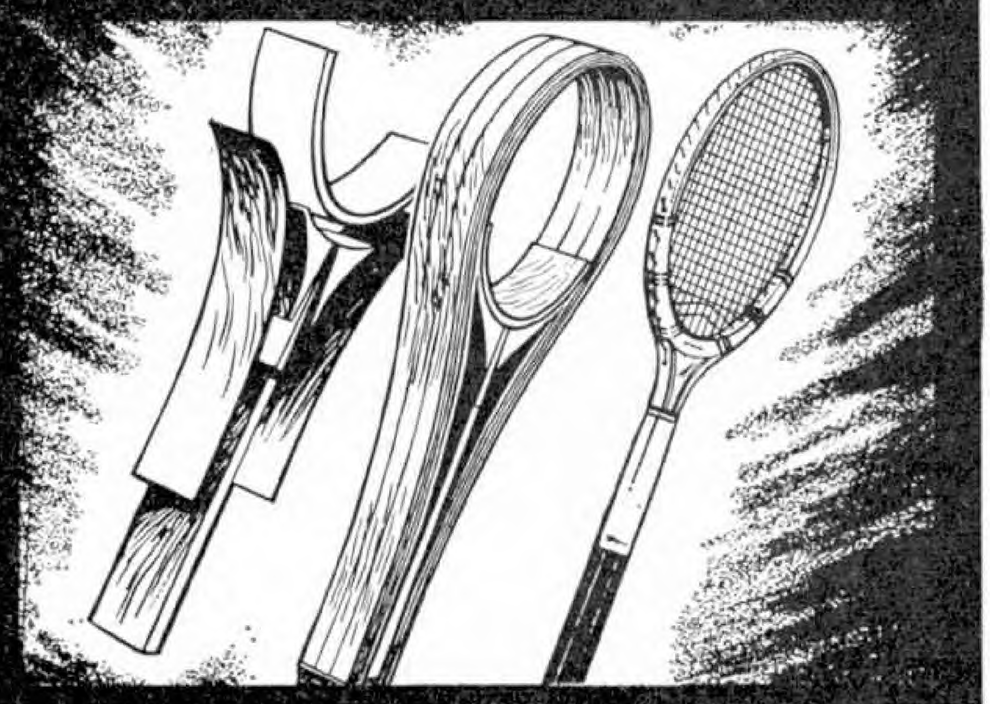
DESERT RESERVOIR!

Here is a reservoir which, like the Arabs' tents, can be folded up when not in use! Actually it is a rubber Collapsible Container made by Dunlop in sizes to hold up to 50,000 gallons of water, fuels or other liquids. Construction engineers working in remote places use them—and so do transport companies, because the containers enable any truck to be converted into a tanker.



UPHILL WORK MADE EASY!

In mines and quarries—and in factories too—materials often have to be carried up steep inclines. Flat conveyor belts would be useless in such conditions, so they use Dunlop "Chevron" which has deep ribs moulded on to its surface in "V" or *chevron* formation. This belt will carry coal or gravel at angles as steep as 45° without any of the material sliding back.



THERE'S STRENGTH IN NUMBERS

Take a close look at your tennis racket and see if you can count the number of pieces of wood used to make it. In the Dunlop "Maxply", used by the world's champions, there are nineteen in all, including nine separate laminations of ash, beech, hickory and cellulose fibre strip in the frame alone. These ensure that the racket is light and strong and will keep its shape.

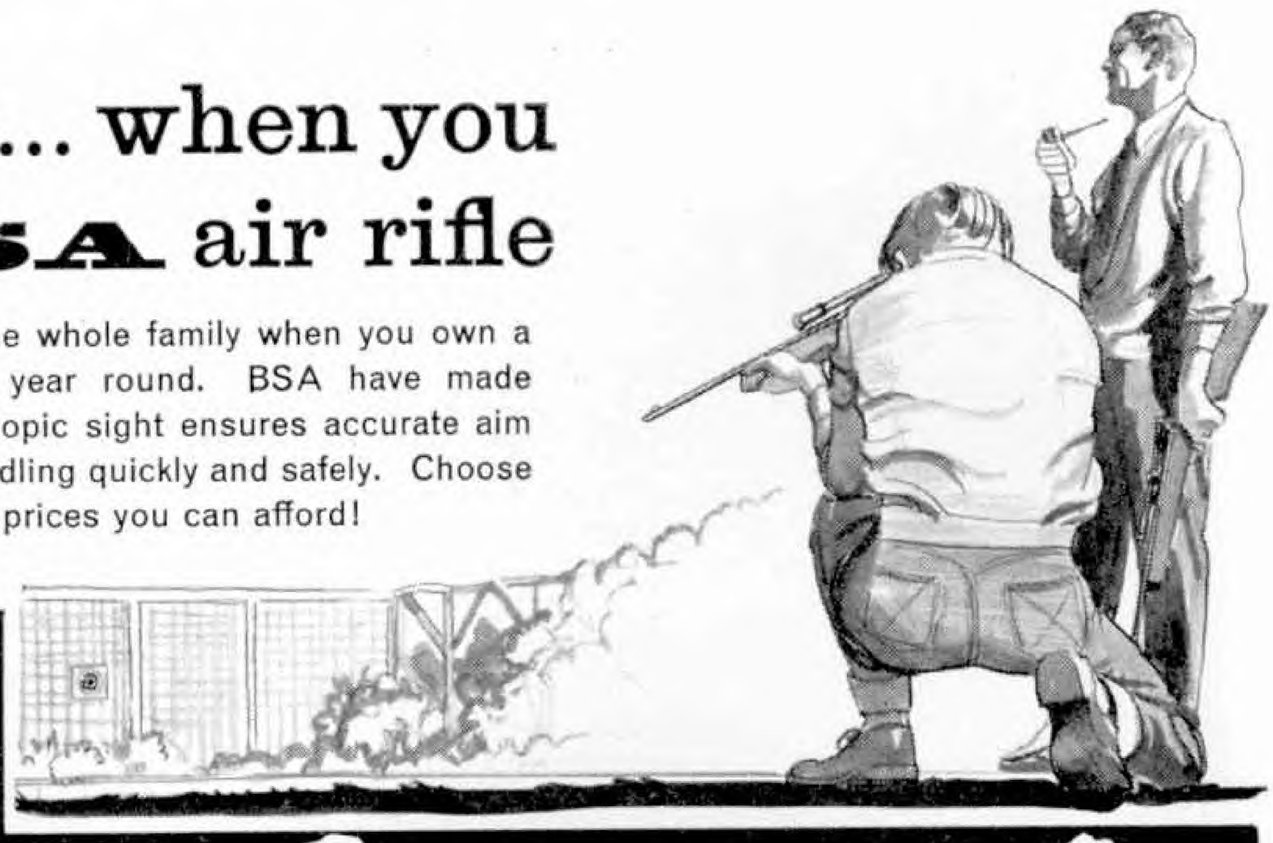
DUNLOP

SYMBOL OF PROGRESS

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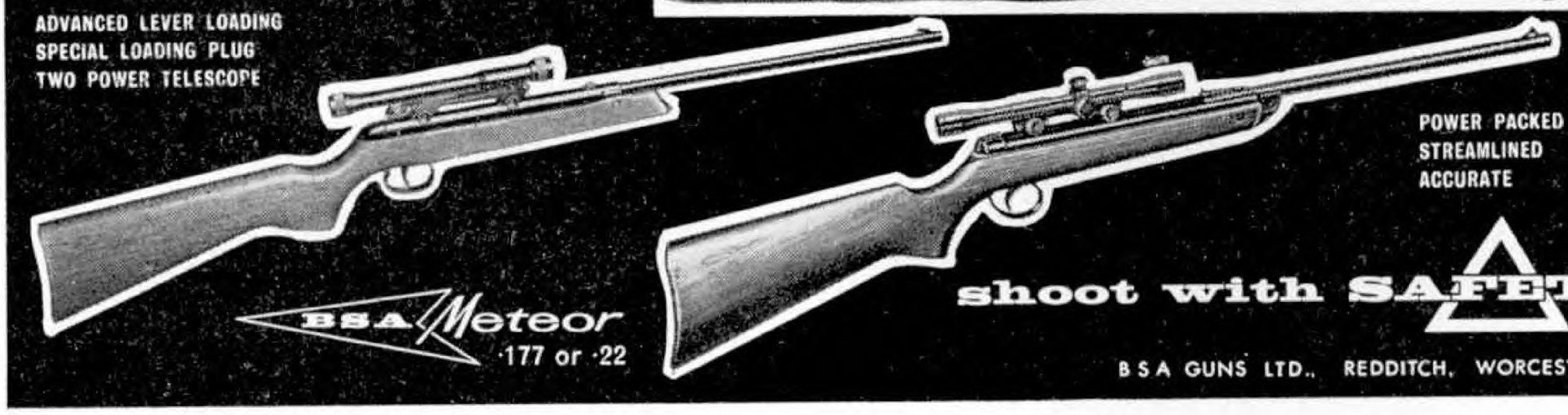
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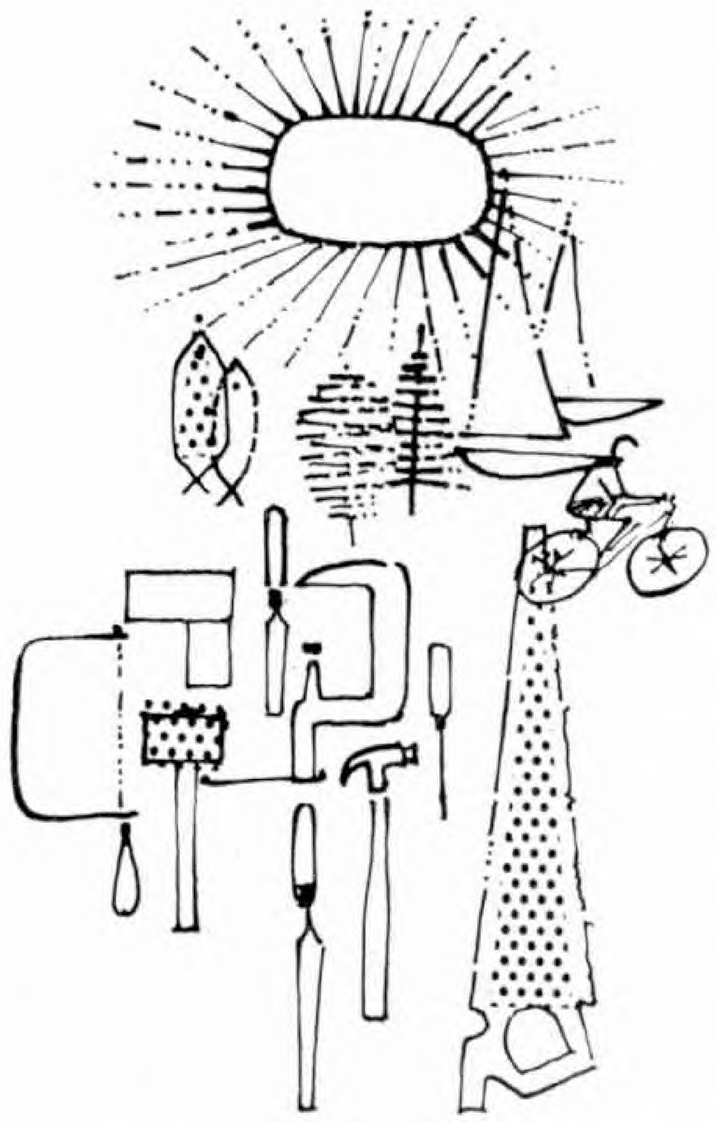
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meccano magazine

June 1964 Vol. 49 No. 4 Published monthly



holiday hobbies supplement

Soon, you'll be packing your bags to go on holiday. Some of you will be going abroad, some on cycling tours, maybe, and some for two or three weeks by the sea. Well, spoil yourselves for a short time. We all need it—a break and the sunshine—now and then.

But what happens when you come home again? Your school holidays will go on for weeks and weeks after you come back. Then is the time you will want a hobby. To give you suggestions to help you enjoy your summer holiday to the full—instead of having it just drag on—we are publishing next month a special pull-out **Holiday Hobbies** Supplement. How about that?

There will be ideas about camping, climbing, games, outings of all sorts, rainy day hobbies for you so that you don't just sit looking out of the window, watching the rain coming down like stair rods.

So, if you want some good ideas for your summer holiday spare time, order your July Meccano Magazine . . . now. Take it from me, they are good ideas; the sort of ideas that will make you want to get up and get started.

IN THIS ISSUE

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Ordering the Meccano Magazine overseas

Readers overseas can order the *Meccano Magazine* from Meccano dealers or direct from the publishers.
The subscription rate for 12 months is the equivalent of 20/- sterling at the current rate of exchange.



1

THOSE OF YOU, who, after reading last month's feature on kit sections, went out and bought a control line model will by now be rapidly nearing the first flight stage. Before you dash off to the nearest field and hopefully commit your pride and joy to its own devices there are a number of things to be done.

The performance of your first model will perhaps determine whether you stay with the hobby or take up some less exacting (and less rewarding) pursuit. The only certain way of ensuring flying success is to approach this exciting stage methodically—don't be rushed—a couple of hours spent getting everything shipshape will save you days of repairing and rebuilding afterwards!

First of all, make sure you know how to start and adjust the running of your engine. Manufacturers' instructions supplied with their engines should be carefully studied before you begin, and although I know it is a great temptation to get the engine operating at the first opportunity, please do resist the temptation to use the workshop vice as a test stand! Model engines are not intended to be squeezed in the jaws of a vice and they will be permanently damaged if so treated. It is, however, a good idea to get to know how to operate your engine before you fit it to your model. Special test stands are made and are quite reasonably priced but are not really essential. A piece of $\frac{3}{8}$ in plywood or two lengths of $\frac{3}{8}$ in square hardwood drilled to take the engine bearer bolts will do quite well.

Be sure you have the correct fuel for your engine. It is usually bought ready mixed in $\frac{1}{2}$ pint tins and there are several blends to choose from at prices ranging from about 3s. to 4s 6d. Most modellers transfer the fuel to a polythene 'squeeze bottle' for convenience, these cost about 1s 6d, including filling spout, and will last for years. Diesel engines need only fuel to operate them since ignition results purely from the compression of the gas in the engine cylinder.

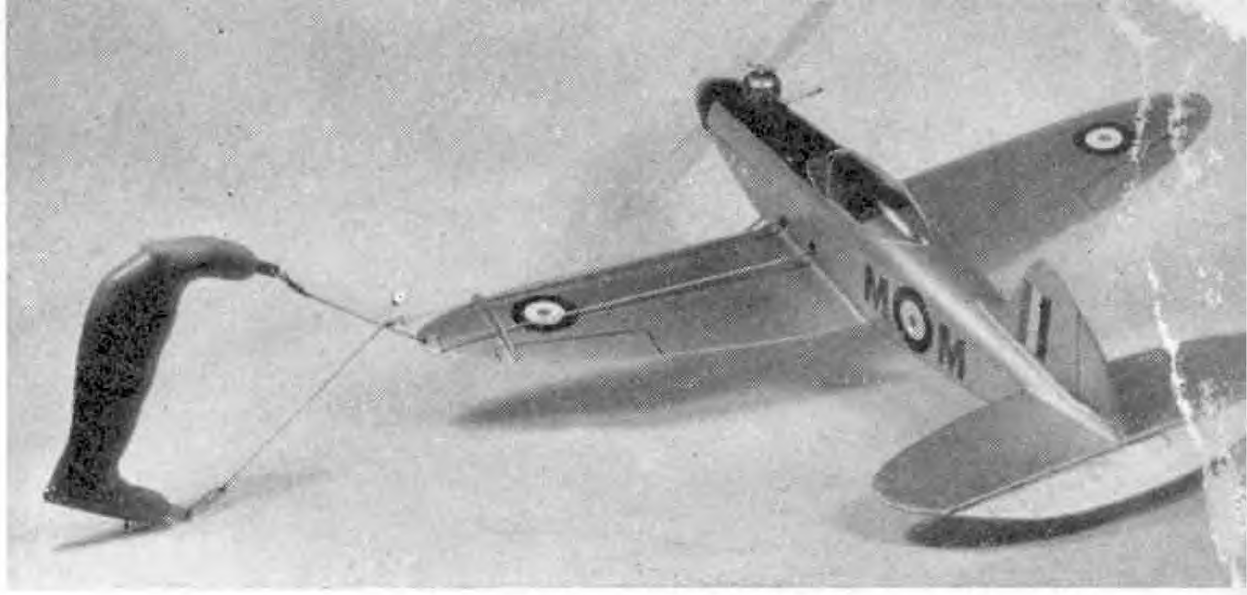
A glow plug engine, on the other hand, has in its cylinder head, a tiny platinum element, rather like a minute electric fire, which must first be heated in order to ignite the fuel and start the engine, when the propeller is flicked over. This glow plug must be connected by means of a special 'glow clip' to a battery of the correct voltage. As soon as the engine is running, the clip and battery are disconnected when the engine will continue to run until the fuel is exhausted, the glow plug element being kept hot by the combustion of fuel in the cylinder. Some plugs require 1·5 volts when a 'Bell Battery' will be found a good power source, other plugs need 2 volts, and in this case a small accumulator is needed. Never use a 2 volt accumulator on a 1·5 volt plug without a suitable voltage dropping resistance in the circuit or it will certainly burn out. Flat batteries and burned out plugs are frequent causes of annoying starting troubles with newcomers.

Once you learn to run the engine on its test stand then—and only then—should you install it in your model. When you tighten the engine mounting nuts on the bolts *do* use a spanner—never, never tighten the nuts with a pair of pliers!

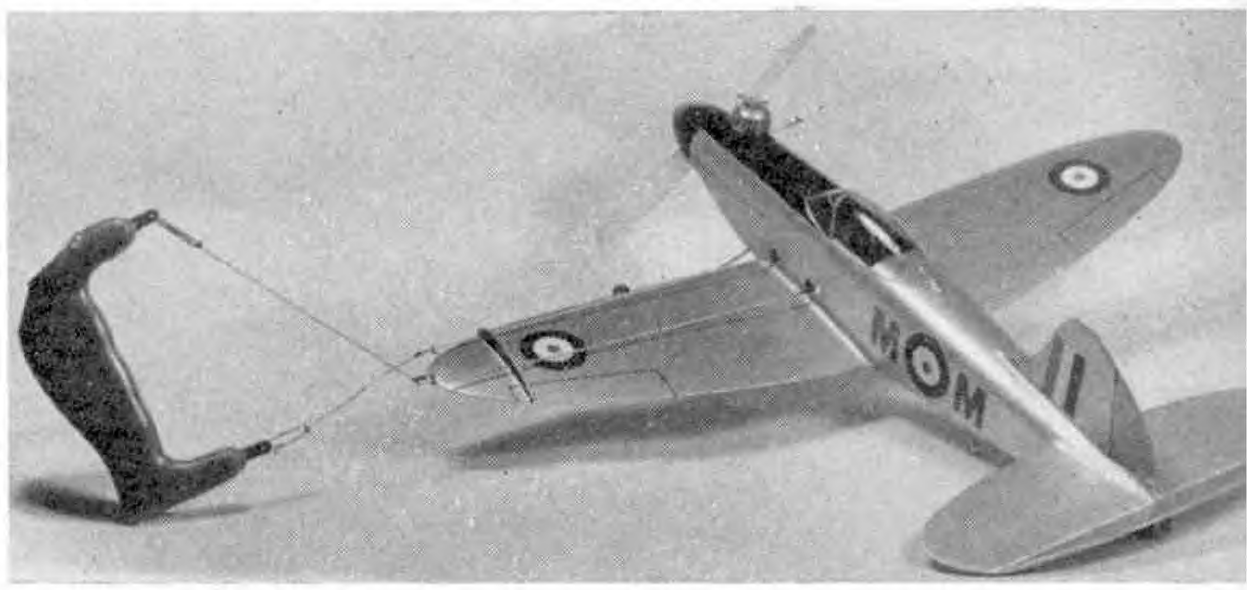
In the case of my Keil Kraft Phantom Mite, I used a Quickstart Dart ·5 cc diesel engine and this had to be connected with thin neoprene tubing to a separate fuel tank mounted in the fuselage. Thin gauge neoprene

Aeromodelling
by **John Atkinson**

The first flight with your control line model plane



2

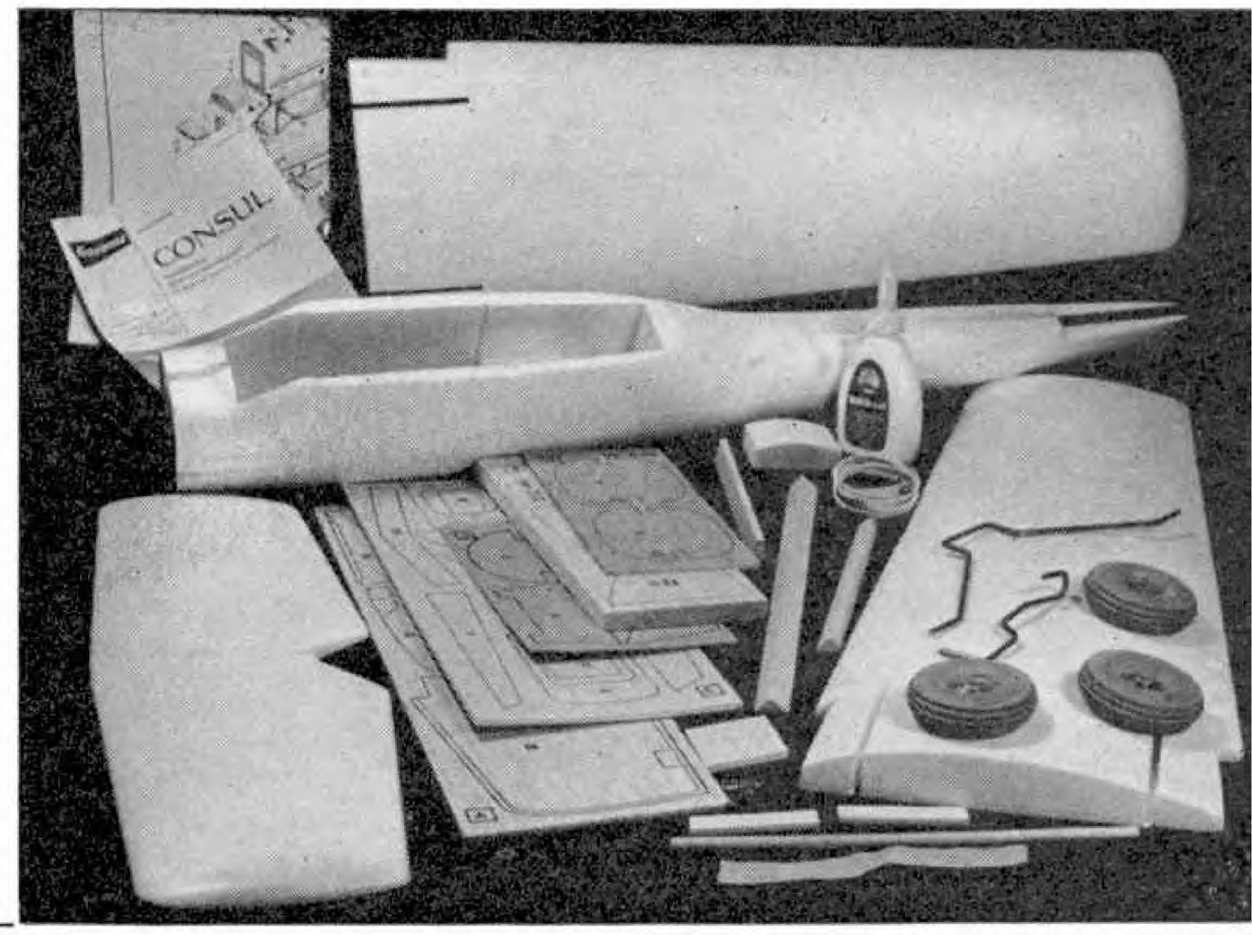


3

tubing is used and it is very important to ensure that it is not kinked. The tube must bend back quite sharply behind the needle valve, and I found the ribbed variety resisted kinking much better than the smooth kind. Now, before fixing the top cowling in place, be sure you can still operate the engine properly!

A small model, like the Phantom Mite shown here, must be flown on lines no longer than 25 ft and preferably 20 ft. These lines are best made up from thin steel control line wire which is specially sold for this purpose; never use thread, since it will certainly break under the strain of flying. Monofilament fishing line is sometimes usable but tends to stretch, giving very imprecise 'spongy' control to the model.

Steel lines must be carefully made up, and particular attention given to the loops on the ends, the photo



4



5

1 If no smooth surface is available hand launching will be necessary —it needs practice! Here a 'combat model' has just left the launcher's hands. A paper streamer is attached to its tail and the aim of combat flying is to fly two similar models in the same circle, each one trying to cut the other's streamer with his propeller—very exciting!

2 Here the control line handle is connected to the Phantom Mite with very short lines (they should be 20 ft long when the model is flown).

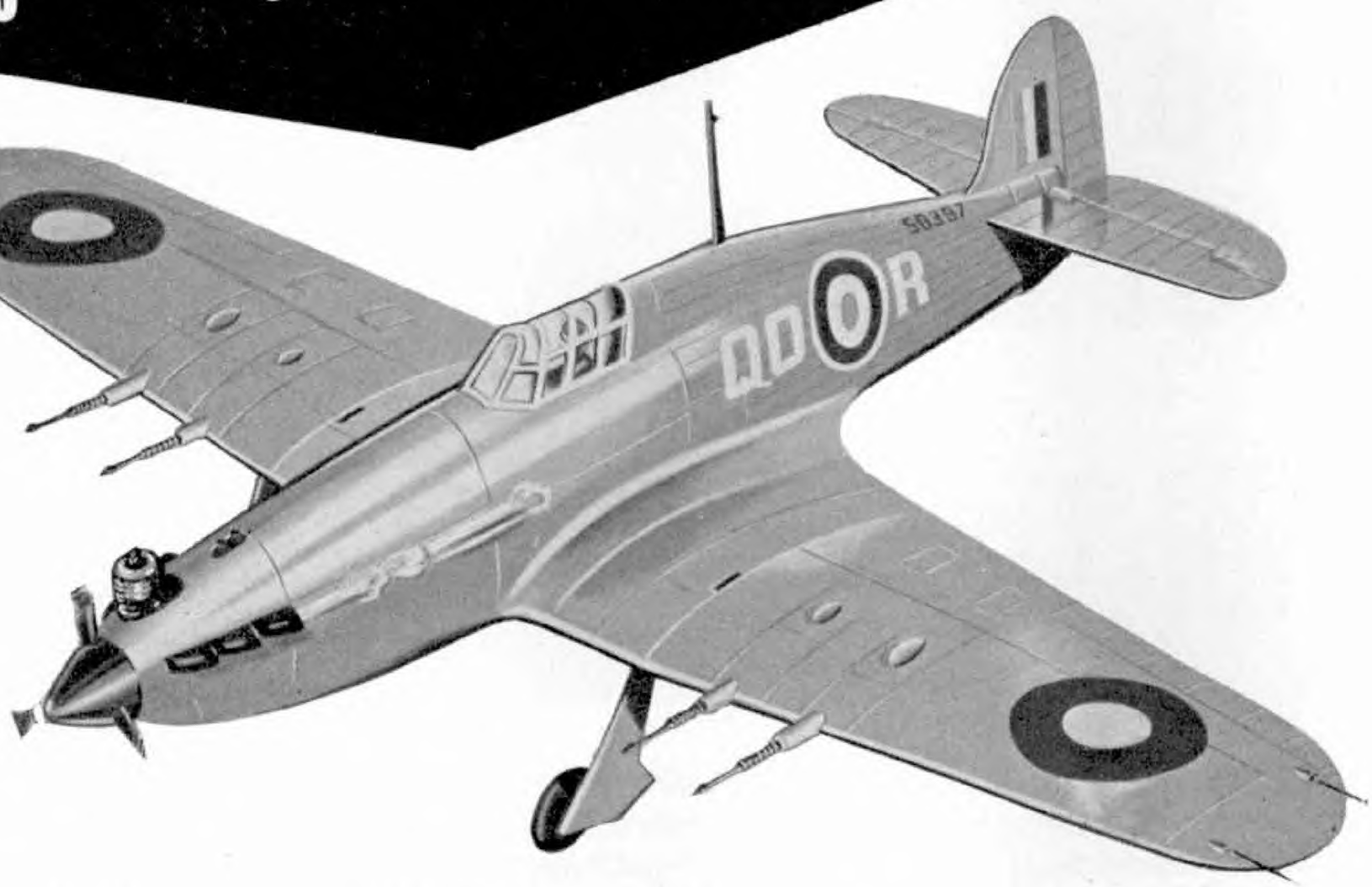
3 Moving the handle 'down' lowers the elevator on the tailplane, causing the model to lost height. Raising the handle raises the elevator for a climb. These movements are exaggerated for clarity. In practice only *fractional* movements are required.

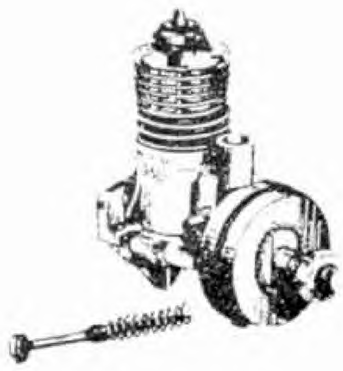
4 The Graupner Consul kit is chiefly expanded polystyrene. Sponge rubber wheels and pre-vent undercarriage are included but wood parts must be cut out.

5 Cox Spook C/L kit is all plastic and even includes lines, C/L handle, propeller, fuel tank and plastic, colour printed covering!

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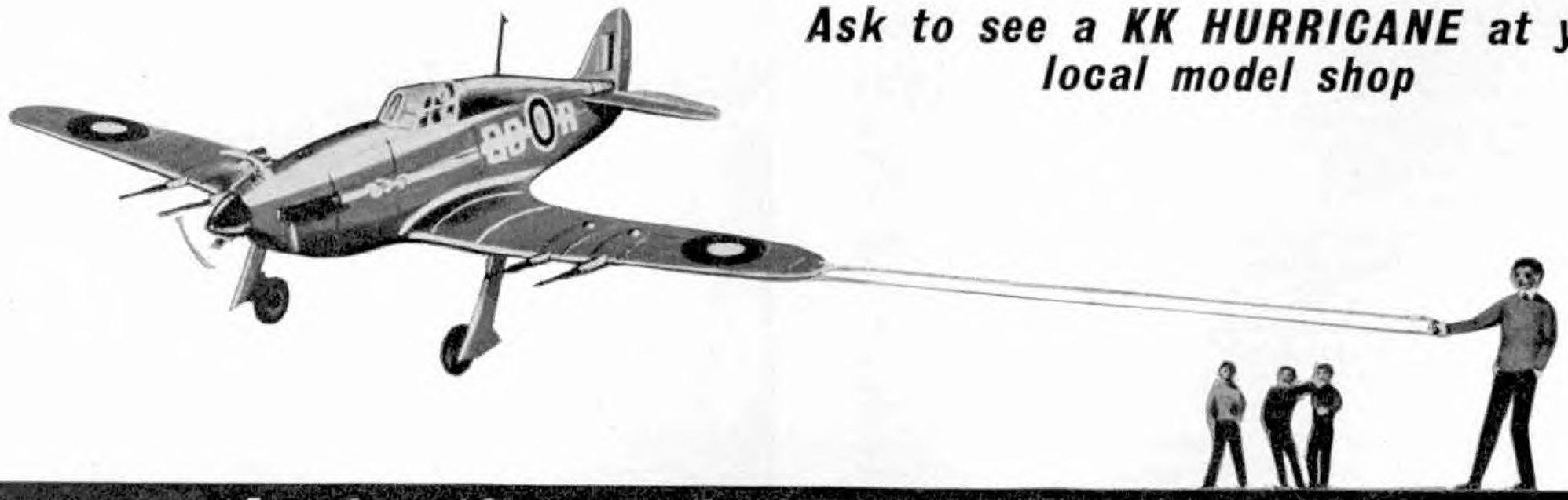
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A plastic model that really FLIES!



1

sequence shows a quick way to make these loops. You will need two 20 ft lines each *exactly* the same length, they should be made up as a pair in order to ensure length equality. Measure out two 20 ft lengths of wire and, using a nail, held in a vice, make up a loop in one end of each length. Threading both loops over the nail, stretch both wires tight, and holding a second nail, form loops in the other ends. This is a job I like to do in the garden where I have a headless nail driven into the fence, just for making up control line loops. (See photos on p 9.)

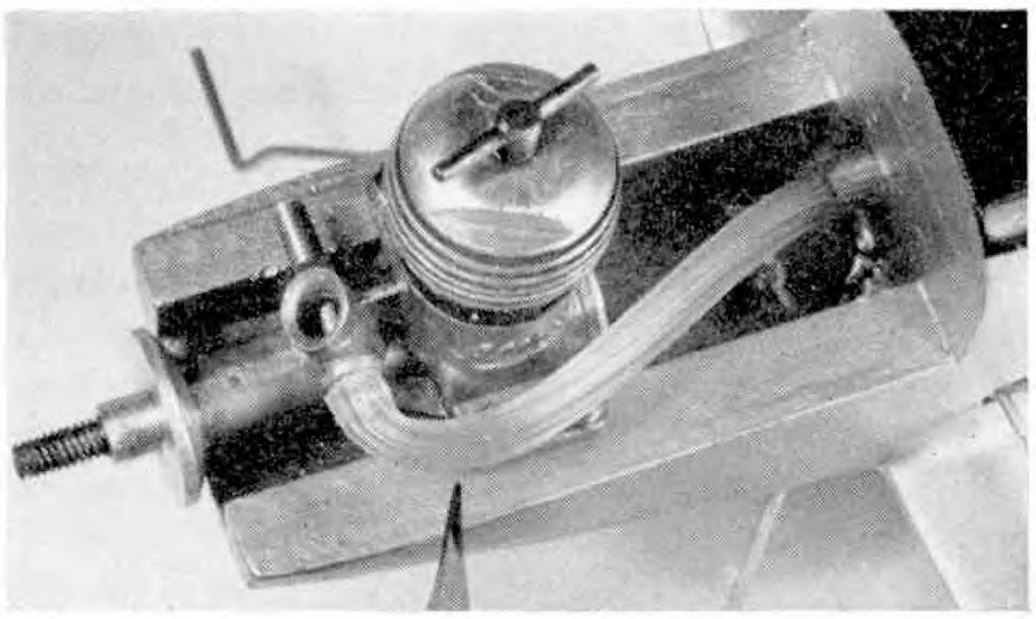
Storage of the completed lines is very important. They must not be kinked for this will weaken the lines very seriously. A large tin such as a Golden Syrup tin, on which the lines can be wound, is an ideal method of storage. My photograph shows such a tin in which I have drilled three holes and inserted three $\frac{1}{2}$ in long 8 B.A. bolts. One end of each wire is looped over each outside bolt and with the other ends still fixed to the nail (in my fence) I roll the tin along the wire until the lines are completely coiled around the tin. Strong paper clips are threaded through the end loops and a rubber band is used to hold these clips to the third (centre) bolt in the tin.

For your first flight *do* try to pick a calm day. A high wind will blow your model towards you and you will probably lose control and crash it. To fix the lines to the model remove the rubber band and attach the clips to the wire control lead-outs on the model, remember to hold the wire to the tin to prevent it unwinding and becoming tangled. Have your helper hold your model and walk backwards until all the wire is payed out.

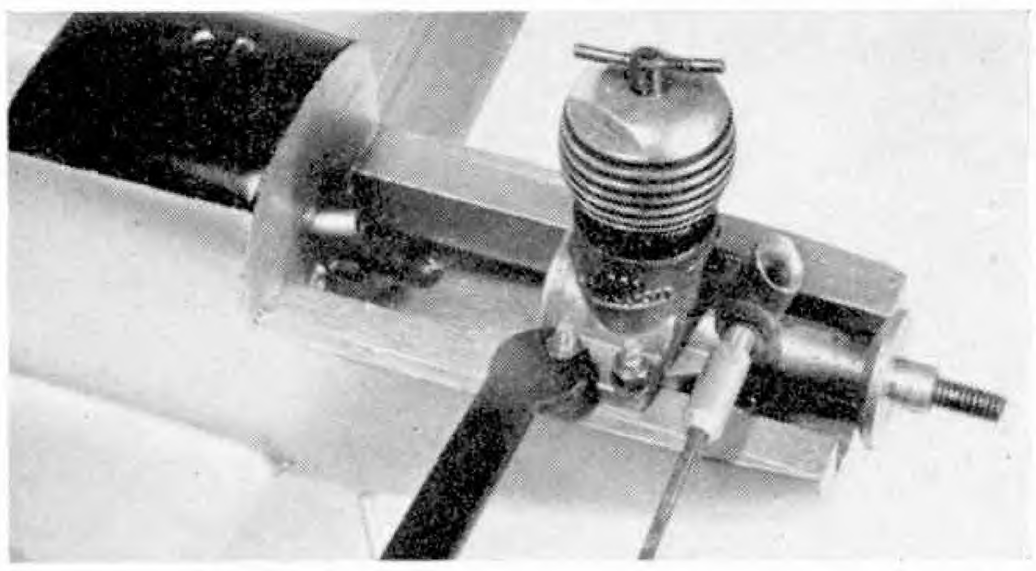
The control handle is now clipped to the wire ends. Pick up the handle and check that when held perfectly upright, the elevator on the model is perfectly 'neutral'—neither up nor down. Now move the handle and make sure that when the handle is raised (the top pulled towards you) the elevator moves UP. If it moves down, you must reverse the lines on the handle. Some handles have adjusters fitted so that the neutral position may be altered to compensate for any slight line length inequality—this is important.

Flying the model is not difficult but first of all be sure that it balances where shown on the plan. A slightly nose-heavy model is easier to fly than a tail-heavy one which is often completely uncontrollable.

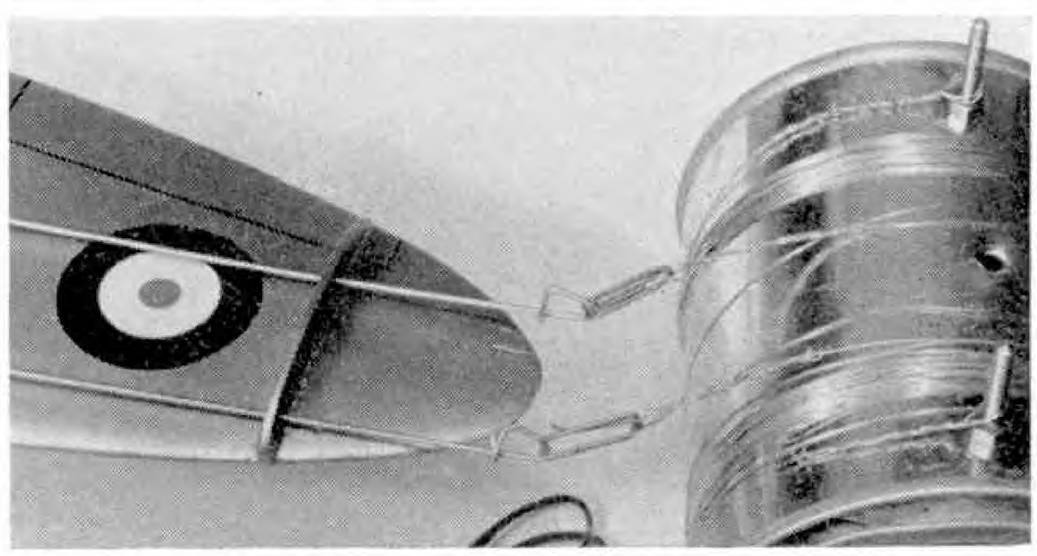
If you are fortunate enough to have a smooth area on which the model can take off, the first flights will be simplified. Start the motor and make sure it is delivering full power. Position the model so that it is pointing down wind, and while your helper holds the model, take up the handle, check the control movement again and hold it so that the elevator is exactly neutral. Hold your



2



3



4

1 Here is how steel wire control lines are stored to avoid kinking—use strong paper clips for *small* model attachment—larger ones need more rigid fixing.

2 Make sure the fuel tube is not 'kinked'. Ribbed tubing resists kinking.

3 Tighten engine nuts with a spanner—*Never* use pliers!

4 Remove the 'keeper' band and attach wire ends to model's lead outs in preparation for flight. Keep hand on tin to prevent the wire from uncoiling.



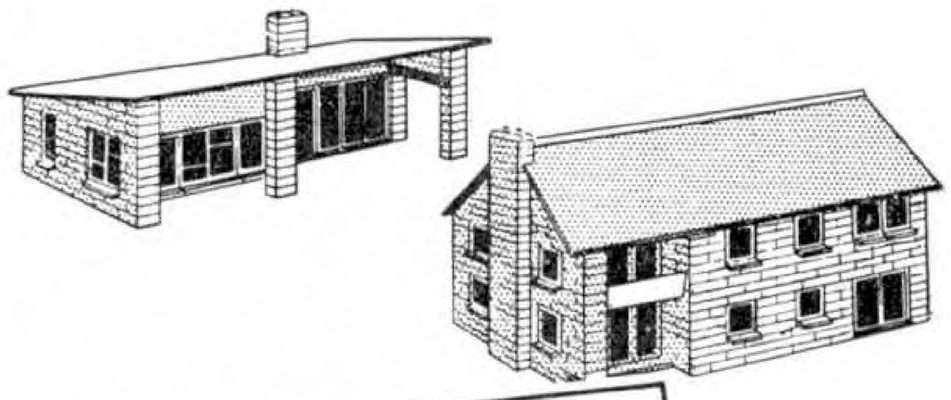
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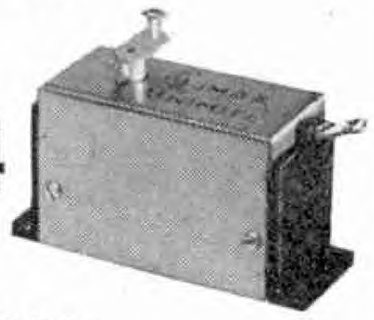
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arm *straight out* pointing it directly at the model and when you are ready signal your helper to release it. Now keep your arm straight and the model will probably take off without any help from you. Never at this early stage try to control the model by flexing the wrist, such movement is much too violent and will almost certainly result in over-control and a crash. If you want to make the model climb or lose height all you have to do is to raise or lower your (stiff) arm.

Don't try anything spectacular until you feel really confident, just gentle changes of height will give you the 'feel' of the controls very quickly. Keep your eyes on the model and disregard the background completely, in this way you will avoid giddiness. After a few minutes, the fuel will run out and when the engine stops you may have to step backwards in order to keep the control lines tight and retain control as the model glides in to land. After some practice you will be able to perform more exciting manoeuvres and more advanced models will, of course, loop and fly inverted. All such manoeuvres should be carried out with the wind at your back —this will keep the control lines nice and tight.

Now here are a few very important points which must be remembered. *Never* fly your models near overhead electric power lines. A control line model will climb quite high and some thoughtless people have been seriously burned and even killed by their models flying near power lines. The model does not have to actually *touch* the line to bring a fatal charge to earth down the control wires, so be warned!

Remember that with 20 ft lines you will require at least a 55 ft diameter circle free of obstacles in which to fly. This is a real minimum, allowing little space for 'back stepping'. Make certain no one is in, or walking towards, your flying area *before* you start the flight. It is painful to be hit by a fast flying model with a high revving propeller on the front.

Never fly near a populated area where your engine noise may annoy the residents; *you* may like the noise—*they* won't. Silencers are available for some engines—fit one if you can; it is certain that within the coming year the fitting of silencers will become compulsory on all model engines so if you are buying a new engine make sure it is one that can be adapted to use a silencer.

Third party insurance is a worthwhile investment. The best way to obtain such cover is by joining the Society of Model Aeronautical Engineers (S.M.A.E). Associate membership costs 12s 6d per year and you are automatically covered against claims up to £50,000. The address of the Society is 10a Electric Avenue, London, S.W.9.

Membership of you local model club will be very helpful, your fellow modellers will make you welcome and the address of the club secretary can usually be obtained from your local model shop.

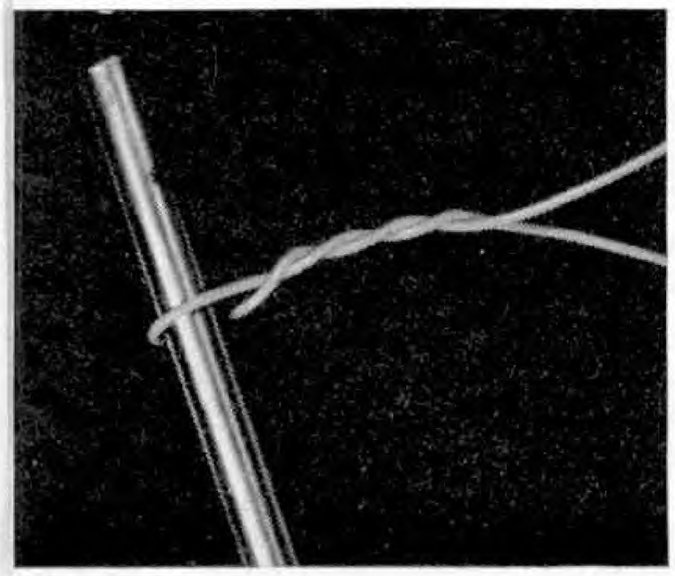
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Two NEW kits which I am now building are quite revolutionary in many ways. They are both made chiefly of plastic and introduce entirely new constructional techniques to our hobby.

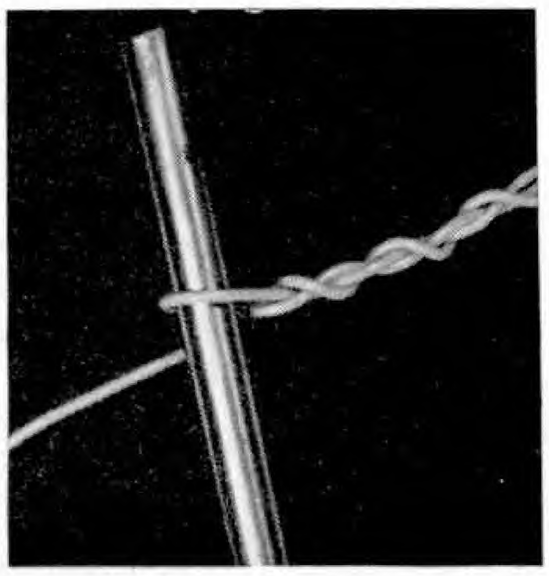
The first is the Cox *Spook* a control line model which can do 'all the stunts in the book'. It is not really a 'first' model but makes a good follow-up after learning to fly on something more basic. The constructional method is not unlike conventional balsa designs but of course all the parts are completely finished and ready to assemble—moulded in high impact polystyrene. A special engine is made for the Spook but it will accept other power plants if desired.

The second model, the Graupner *Consul*, although chiefly plastic is quite different from the Spook in that it is largely made of foam plastic (expanded polystyrene) and is intended for lightweight radio control or free flight operation. Although the bulk of the model is plastic, there are several wood parts to cut out and since many of these are plywood, a fretsaw will be needed. Some modelling experience is required successfully to complete the Consul although the construction is by no means difficult providing adequate care is devoted to it.

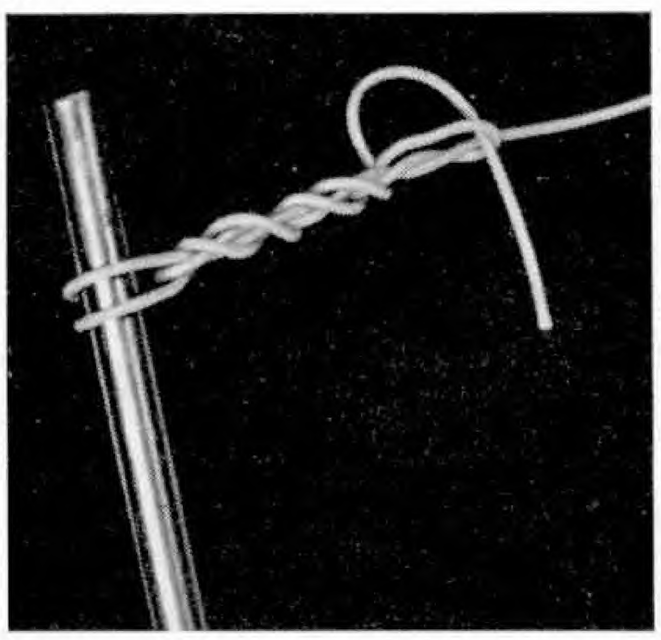
I hope to deal more fully with the construction of both these models next month.



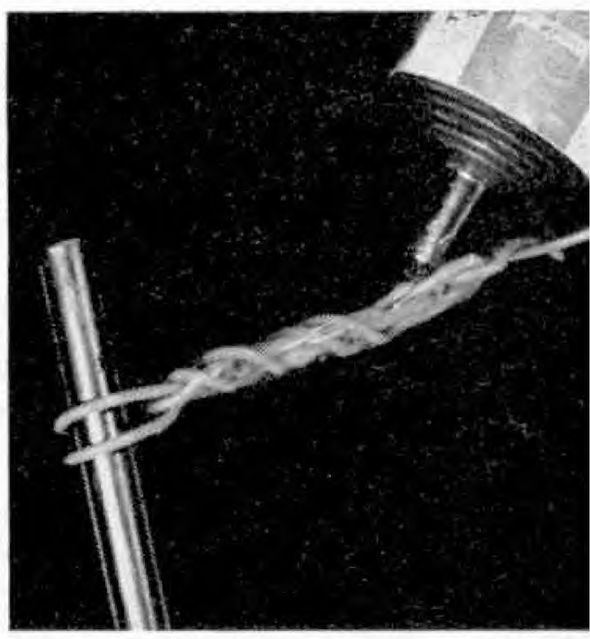
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2



3



4

Here is an easy way to bend up loops single strand steel control lines; very thick wire has been used in these photos in order to show how it is done.

1. Bend the wire round a nail or a $\frac{1}{8}$ in diameter metal rod and twist it back on itself over a $1\frac{1}{2}$ in length.
2. Double the wire end back and wind it tightly back to the nail.
3. Round the nail once more and again twist the wire round itself finally threading the end through the loop left by the first double back.
4. Trim the wire end and coat the whole thing with two coats of balsa cement. Never solder wire loops, the heat destroys the wire temper and acid flux can corrode—dangerous.

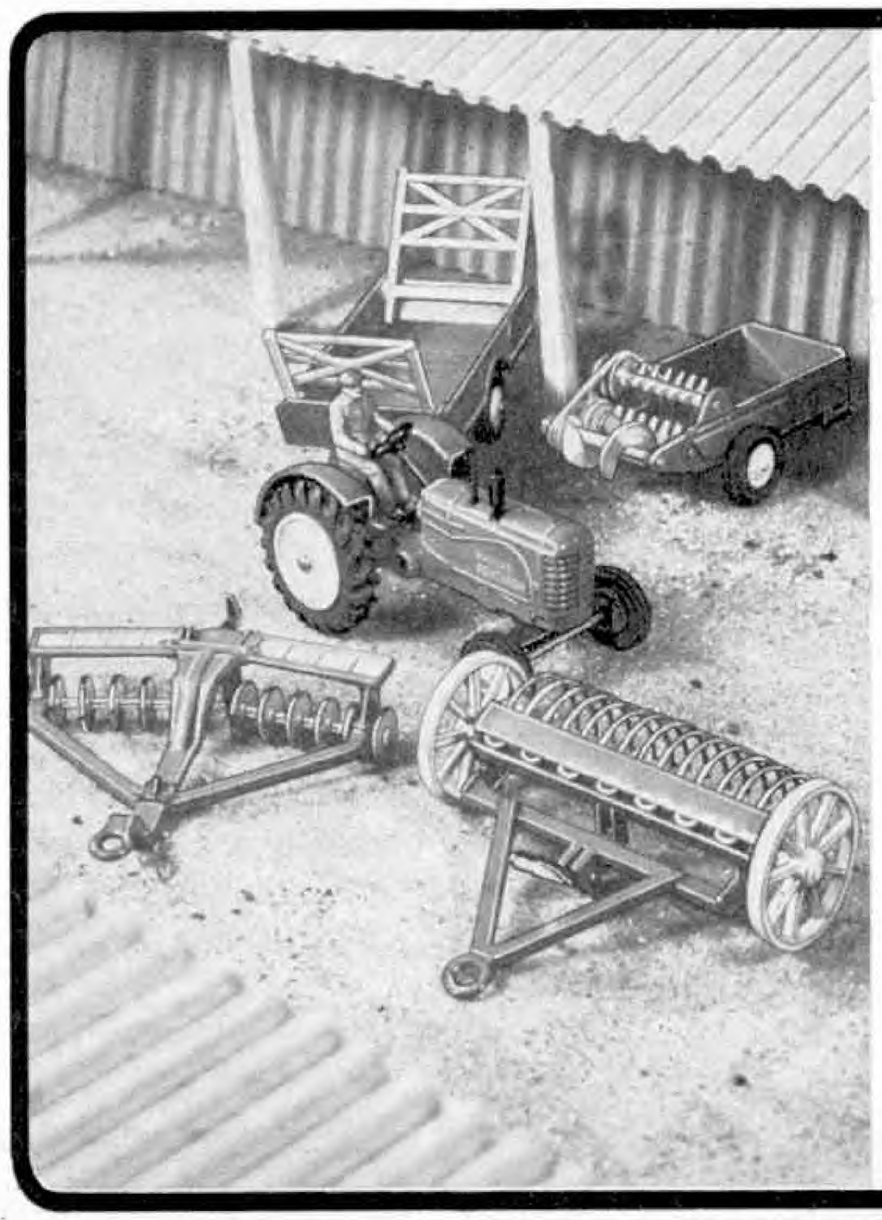
NEW IDEA FROM MECCANO!

DINKY TOYS GIFT SETS

Boys, here's a great idea from Meccano. Six sets, each specially designed to give the greatest excitement, the widest variety of games.
See them all at your nearest Meccano stockist.



All set for hours of excitement



FARM EQUIPMENT SET

All the fun of the farm. All the variety of a farmer's life. You can plough, sow, carry loads, spread manure, gather in the hay.

Farm Tractor. Massey-Ferguson model, with driver. Steering wheel revolves.

Hayrake. For breaking up earth, covering seeds, etc. Discs revolve.

Halesower Harvest Trailer. With detachable fences.

Manure Spreader. Very impressive in action.

Set No. 398 **21/-**

HOLIDAY SET

Organise coach tours. Car trips. Run your boat to the seaside. All the fun of the holidays any time you like!

Vega Major Luxury Coach. Flashing trafficators. Prestomatic steering. Opening boot.

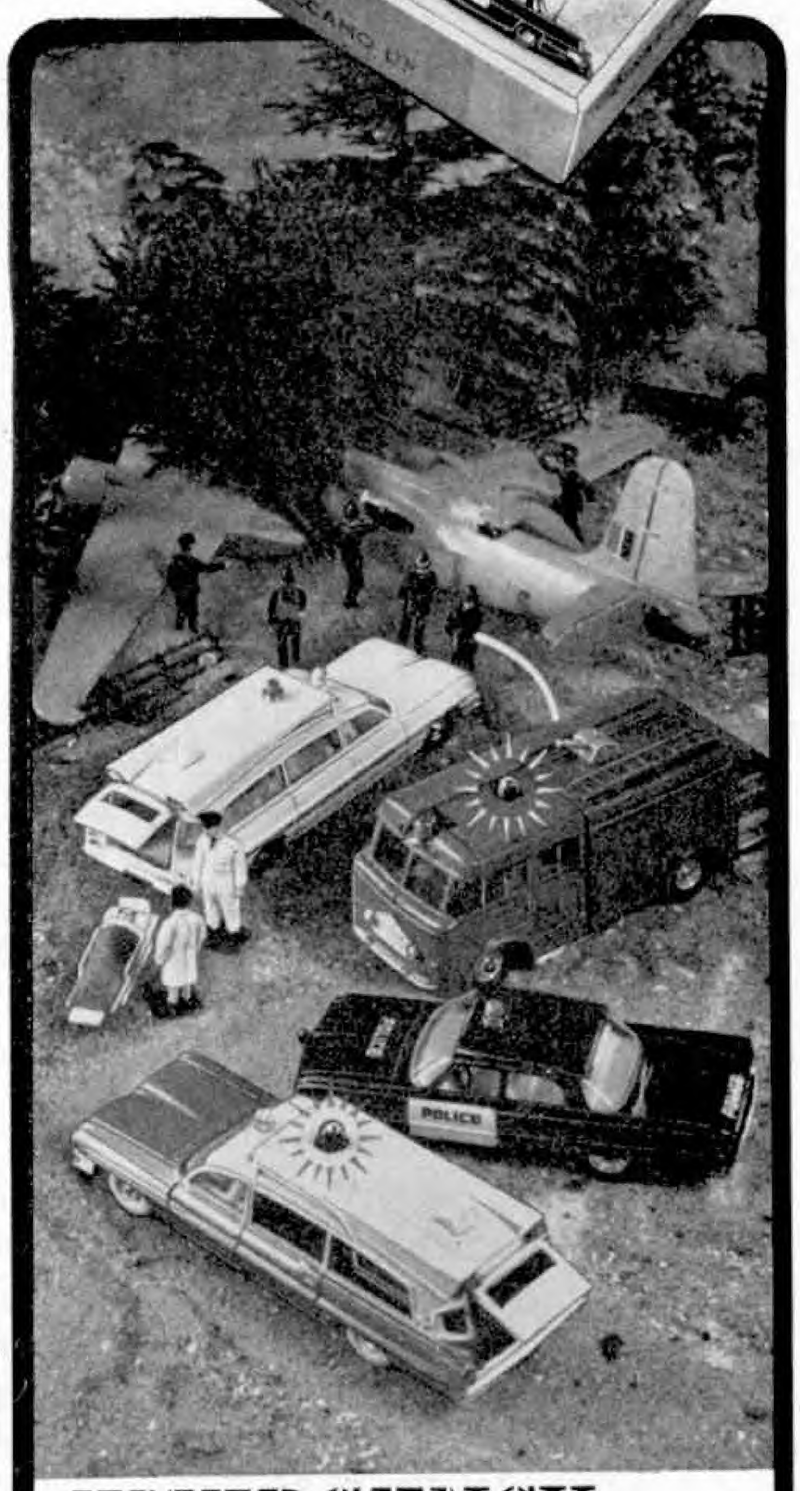
Plymouth Fury Convertible. Hood comes off, reveals fascia, steering wheel, seats. Bonnet opens to show detailed engine. Prestomatic steering.

Mark X Jaguar. Opening boot with luggage. Prestomatic steering.

Boat and Trailer. Healey sports boat. Trailer attaches to Jaguar.

Set No. 124 **35/11**





EMERGENCY SERVICES SET

Cope with any emergency—crashes, fires, accidents. Ideal for a model airport.

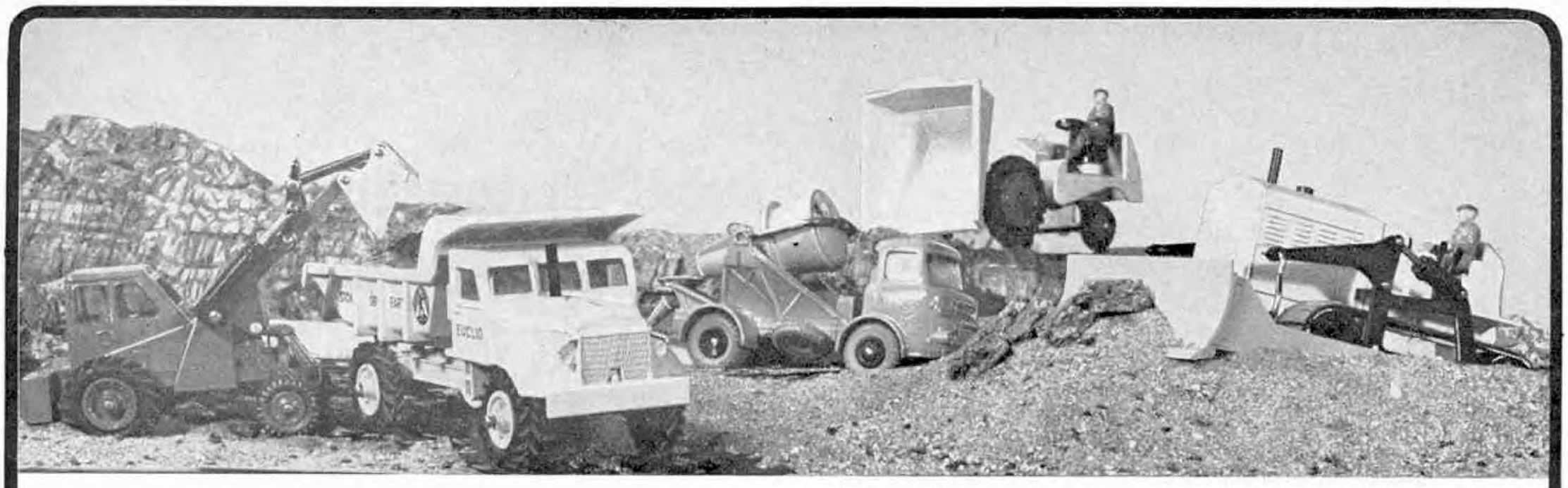
Airport Fire Tender. Flashing amber light. Revolving foam turret. Bell.

Ambulances. Both Super Criterions with drivers and attendants. One has flashing beacon and opening back. Other has a stretcher case.

Police Car. Ford Fairline. Aerial.

Personnel. Extra ambulance attendants, police officer, firemen with axes, breathing apparatus etc. Hosepipe.

Set No. 298 **35/11**



BUILDING SITE SET

Be a construction man—make motorways, rocket sites, houses. Or a demolition man—knock down old buildings. Clear ground, mix cement, carry earth.

Euclid Rear Dump Truck. Tipper works realistically.

Blow Knox Bulldozer. Caterpillar track. Driver. Shovel rises.

Albion Concrete Mixer. Concrete mixer revolves as lorry travels. Spare wheel.

Muir-Hill Dumper. Dumper tips forward. Steering wheel revolves. Driver.

Muir-Hill Mechanical Shovel. Shovel rises and tilts. Driver. Detailed engine.

Set. No. 900 **53/11**



GOODWOOD RACING SET

Hold your own race meetings.
4 cars—two red, two white.

E Type Jaguar. Hard top removes to reveal fascia, bucket type seats. Prestomatic steering.

Porsche. A detailed model of this exciting car.

MG B. Doors open and click shut. Gearbox and lever. Bucket seats. Driver. Prestomatic steering.

Austin Healey Sprite. Fascia. Gearbox. Bucket seats. Prestomatic steering.

7 Mechanics and an owner.

Set No. 121 **22/11**

MOTORWAY SERVICES SET

Arrange chases with the Motorway Police Jaguar. Tow away breakdowns. Race to accidents with ambulance & fire engine.

Police Jaguar 3.4. In Motorway white. Blue flasher. Aerial. Driver and observer. Prestomatic steering.

Fire Chief's Control Car. Nash Rambler. With beacon.

Airport Fire Tender. Amber light flashes. Foam turret revolves. Bell.

Crash Truck. Top Rank Bedford with winding towing winch.

Superior Criterion Ambulance. Back opens. Light flashes. Driver and attendant. Prestomatic steering.

Set No. 299 **35/11**



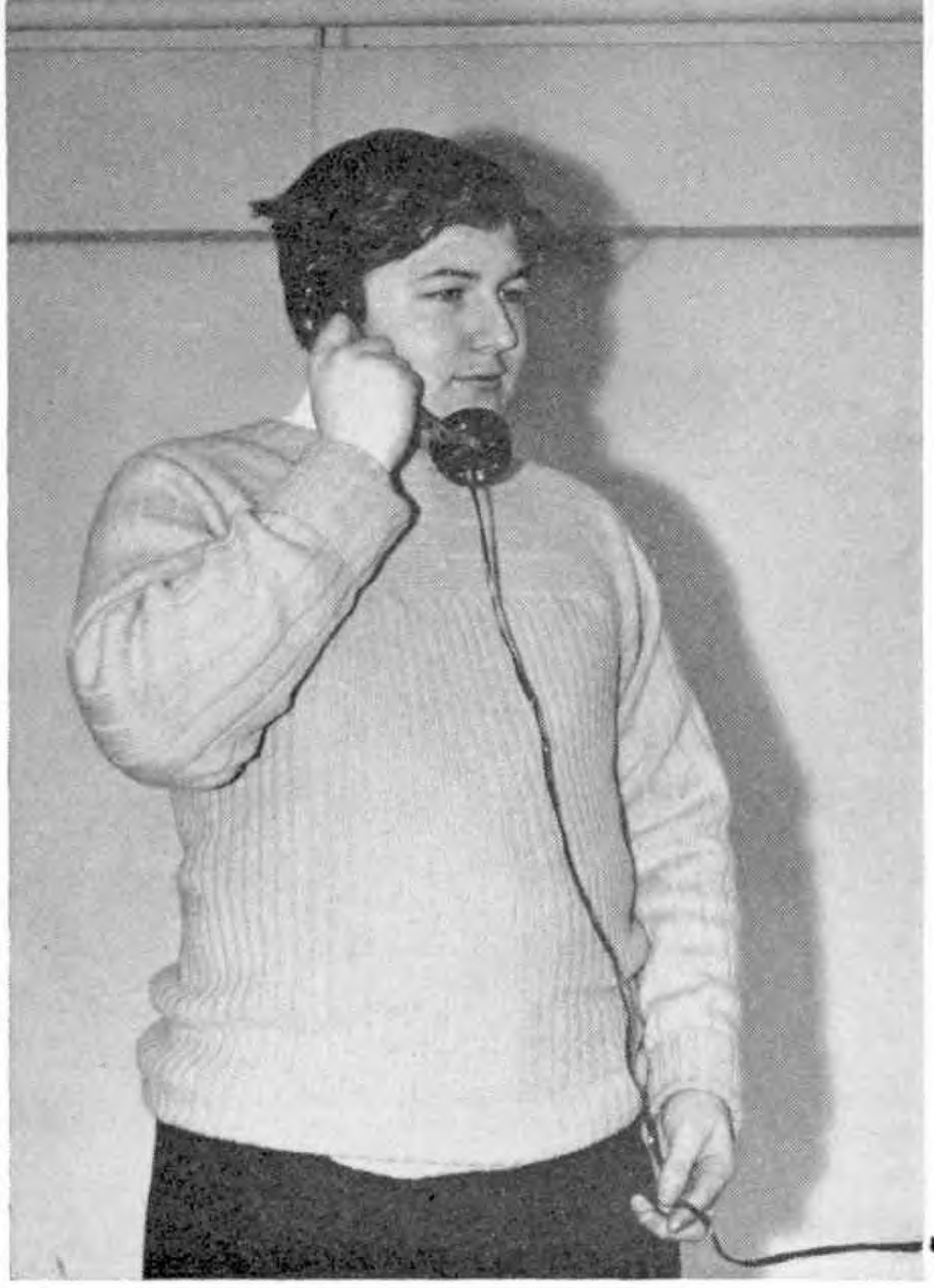
"I'd love one of these super sets for my birthday".



Always something new from

DINKY TOYS®

precision-engineered by Meccano Limited



It costs between ten and fifteen shillings, and should take you less than an hour to make. You don't even have to be particularly 'clever with your hands'. Follow

Make yourself a

HAVE YOU ever had a use for a system of communication between two points? Say, from the house to the bottom of the garden? Or between an upstairs and a downstairs room? If so, you will enjoy making this portable telephone. It costs only a few shillings and takes less than an hour to assemble.

To build this telephone kit you need the following components:

(1) Four ordinary telephone ear-pieces. These are obtainable at most second-hand electrical parts shops (to be found in most towns) and can usually be bought quite inexpensively. The ones used in the actual telephone in the photograph were bought at a shop in Lisle Street, in London, for three shillings each but they can be bought cheaper still. By the way, make sure you buy four *ear-pieces* as conventional telephone mouth-pieces are not required for this kit.

(2) For the handles you can use two pieces of Meccano perforated strip. The length of strip used is a matter of personal convenience but $7\frac{1}{2}$ in (part 1b) at $6\frac{1}{2}$d per strip was used for the model illustrated. If you need a smaller handle, $5\frac{1}{2}$ in (part 2) at $5\frac{1}{2}$d per strip is equally suitable. If you are ambitious and would prefer a more sophisticated handle, a metal carrying handle of the right design would be suitable. You will also need four Meccano $\frac{1}{2}$ in bolts, four Meccano $\frac{3}{8}$ in bolts and twelve matching nuts.

(3) The only other item of equipment you need is a length of twinwire flex. The kind used for electric bells is quite adequate. The cost of this item will be determined by the distance you want to cover. The kit in the picture worked perfectly when tested with 100 yards of wire and should work just as well using twice or even three times that length. More than enough probably for any junior private telephone system!

Altogether, the cost of the pair of telephones, excluding wire, is just under 14 shillings at a generous estimate. If you get a friend to share with you, the cost, of course, is halved!

To make up the telephone kit you should proceed as follows:

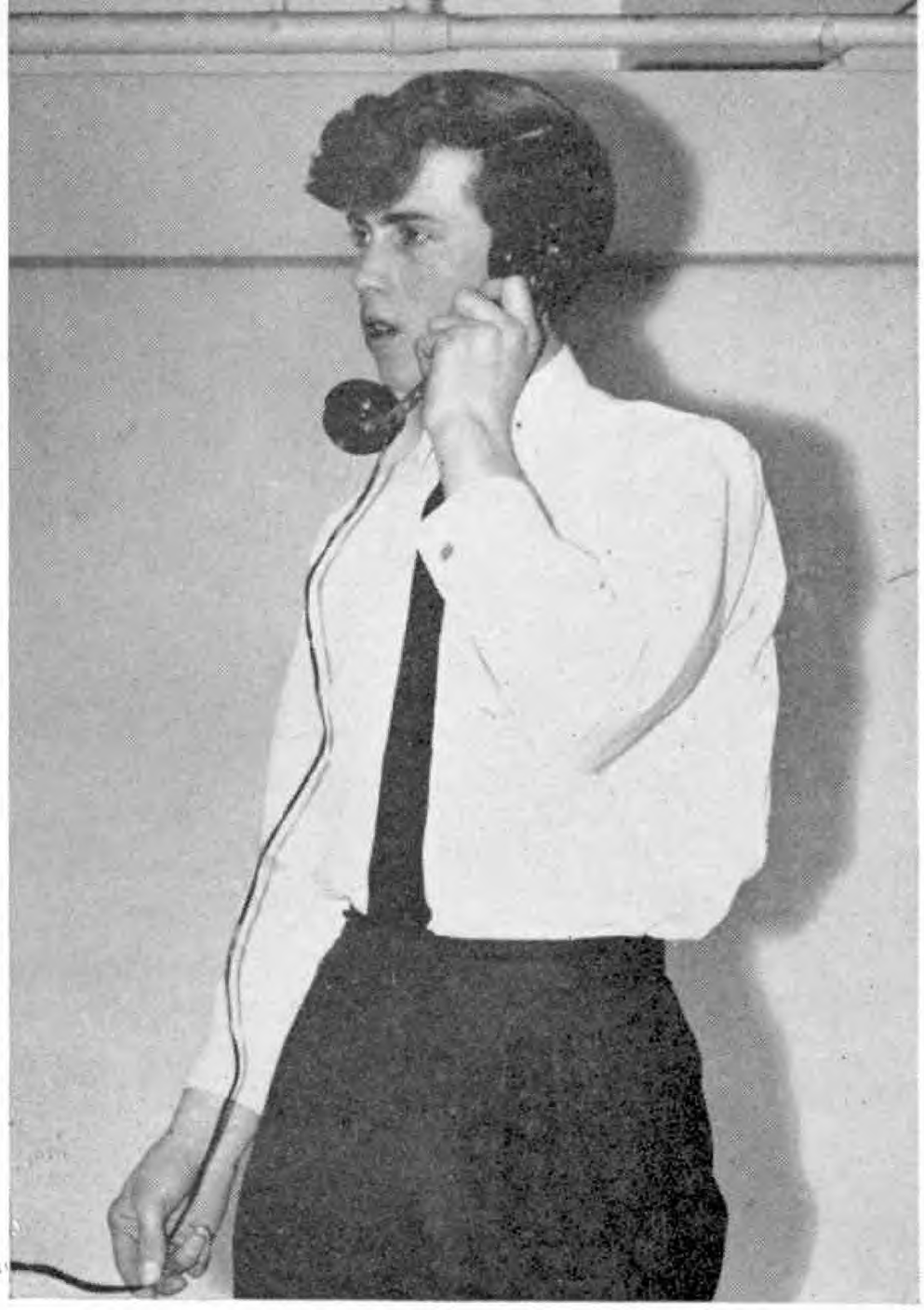
(1) Take the two metal perforated strips and bend one end of each strip to a slight angle at the third hole (see diagram).

(2) Take one of the telephone ear-pieces and unscrew the part you place against the ear. This will reveal a thin metal disc called a diaphragm. You should remove this by gently sliding it sideways. In the base of the ear-piece there are two holes. Insert through one of these holes, from the inside, one of the $\frac{1}{2}$ in bolts and screw on a nut firmly from the outside. Insert through the other hole one of the $\frac{3}{8}$ in bolts, securing on the outside, with a nut, one end of one of the metal strips. Replace the diaphragm and screw on the plastic cap.

(3) Proceed in the same way with another ear-piece and the other end of the metal strip.

(4) Next comes the wiring-up and here you should carefully follow the diagram. Assuming you are using $7\frac{1}{2}$ in strip, separate the two strands of twinwire down to $7\frac{1}{2}$ in. Then cut 3 in off one of the strands, making one long strand and one short strand. Next, expose

David Bennett's instructions and you will find the job simplicity itself.
When you have made it, write and tell us what results you obtained.



Telephone

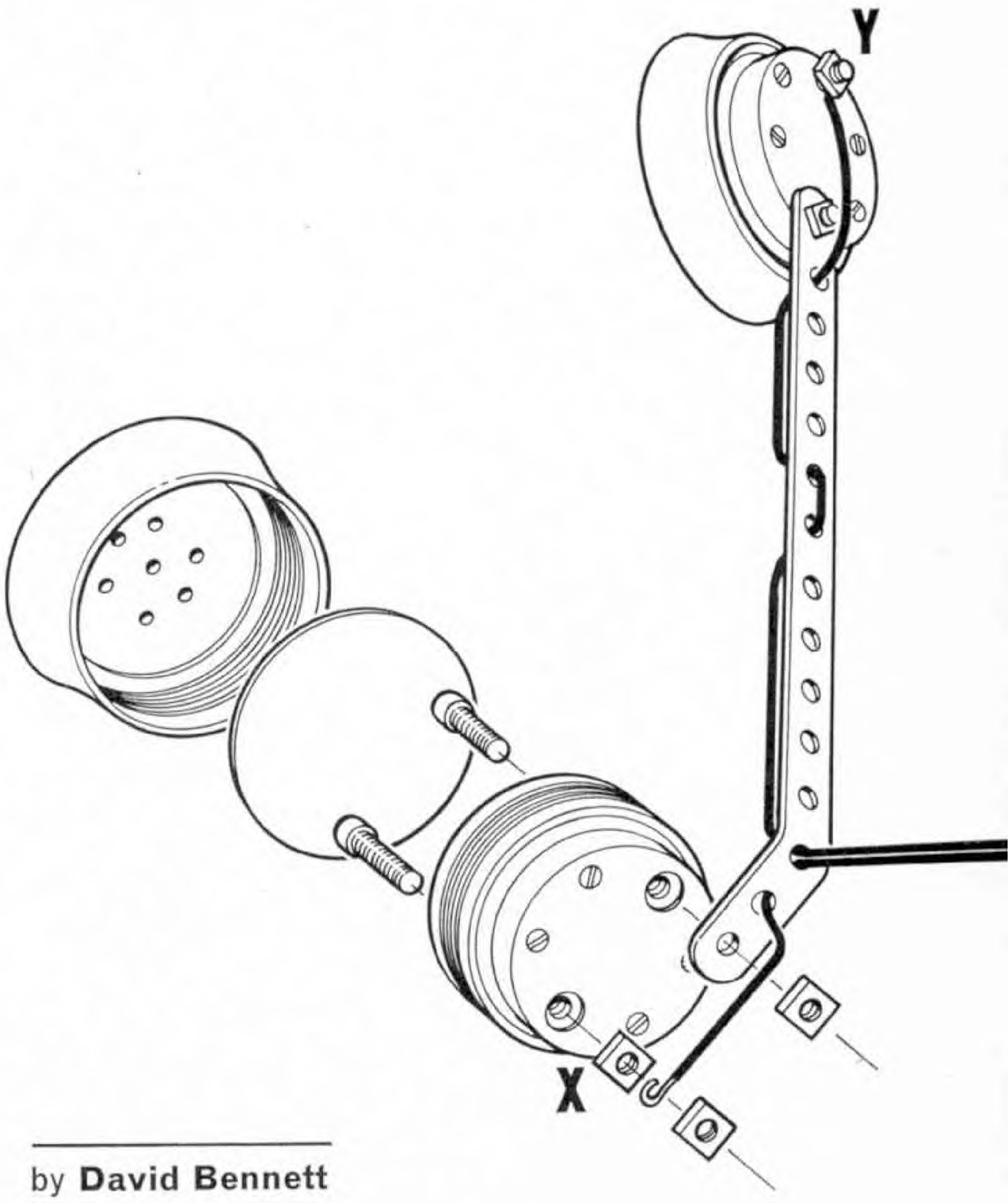
about ½ in of bare wire at the end of each strand. Then, insert both strands through the hole that occurs at the bend in the perforated strip. Moving towards the nearest ear-piece, thread the short strand back through the next hole in the perforated strip and connect the exposed wire to terminal X (see diagram), securing with another nut. The long strand is threaded in and out of the strip as shown in the diagram and connected to terminal Y on the other ear-piece.

(5) The second telephone is constructed in exactly the same manner. When this is joined to the other end of the wire the kit is complete and ready for use.

This telephone works, of course, entirely without batteries. All the power necessary comes from the tiny permanent magnets inside each ear-piece. As you speak your voice causes the metal diaphragm to vibrate. This vibration, in conjunction with the magnets, generates a tiny electric current that passes along the cable and is converted into sound waves at the other end.

This telephone kit should give completely trouble-free service. If anything seems to be wrong it will probably be due to a bad connection somewhere. The perforated strip, by the way, acts as a conductor for the current and it may be necessary to scrape away some of the paint at each terminal to ensure that there is a good circuit.

This telephone kit can be improved and modified in many ways. A flashing light calling system could be made by wiring in a battery, bulb and two way switch. A unit on which to hang each phone is another idea. Use your own imagination to think of ways in which you could make your 'intercom' system better.



by **David Bennett**

mailbag

Anything interesting . . . write about it to the editor

■ 250 *EXPOSURES*—The large camera shown below is an early Eastman-Kodak No. 4, patented in 1885. It held a spool of film sufficient for 250 exposures, each 5 in by 4 in.
The lens is an RR. Bausch and Lomb f/8—focal length 6½ in. There was no backing paper to the film, each exposure being marked by two tiny spikes on the 'pricker roller' in the spool chamber, which made small perforations. The American explorer Peary took one of these cameras with him on his Polar expedition in 1891. Overall dimensions of the camera are 13 in by 5 in by 6½ in. It has rack and pinion focusing from 6 ft to 100 ft and a disc showing the number of exposures made.
The film was supplied wrapped in black paper. The instructions for loading into the camera also gave the details for re-using this paper to pack the exposed film and mail it to the Eastman Company for processing. Developing tanks were not then available for home processing and imagination boggles at the picture of developing a 250 exposure roll by the see-saw method.
A. D. Browning, Ramsgate

■ *NEW WHARF*—The train ferry at Harwich has always interested visitors, but their attention this summer will certainly be drawn to the new wharf designed mainly for the export and import of motor vehicles and tractors. In addition to the more conventional methods of loading, a special ramp has been constructed for bow loading vessels, and cars can be driven directly from the dock on to the ship. Although bow loading was used for tank landing craft in the last war, the square nose of the craft dropped down to form the ramp. In the vessels using the new wharf, the bow is raised to enable cars to be driven on to the ship.
Holmes L. Hall, Dovercourt, Essex

■ *FIGUREHEAD FASHIONS*—Reading Robert Gore's interesting account of figureheads prompts me to send you a picture of one, which is suspended on a wall of a house in Pilgrim's Lane, Hampstead. When taking the photograph, I asked the owner of the house, a Norwegian lady, about the figurehead, and she told me that the ship from which it came was built at Christiansen in South Norway in 1860, but could not remember the name. The figurehead had been in her family's possession for many years.
J. A. Fleming, London, N.W.3.

■ *MILE WALL*—Almost 100 years ago, a brick wall was constructed along that part of Broadlands Park bordered by the main Southampton to Romsey Road. Because of its length it was known locally as 'the mile wall'. The bricks were made nearby at Toothill on the Broadlands estate by the Bennett family.
One of the brickburners is reputed to have lost his favourite clay pipe in the kiln. To commemorate the loss—a clay pipe was moulded into one of the bricks. Further along, and above the milestone 'Romsey one mile' five bricks have been engraved with the name 'Bennett'; only the initials are different. The date is 1866.
Ron Cary, Southampton

■ *IT'S MAGIC*—I like your new style magazine much better than the old. It is more colourful, and as it has all the articles in groups, it is easier to browse over. I wonder if there would ever be any possibility of an article or two on magic—tricks, patter, and making apparatus. Most boys all over the world would like more information about this hobby.
Andrew Frost, Kew, Victoria, Australia

It must be magic; the same idea was in our mind, and we hope to publish articles on magic later in the year—Editor

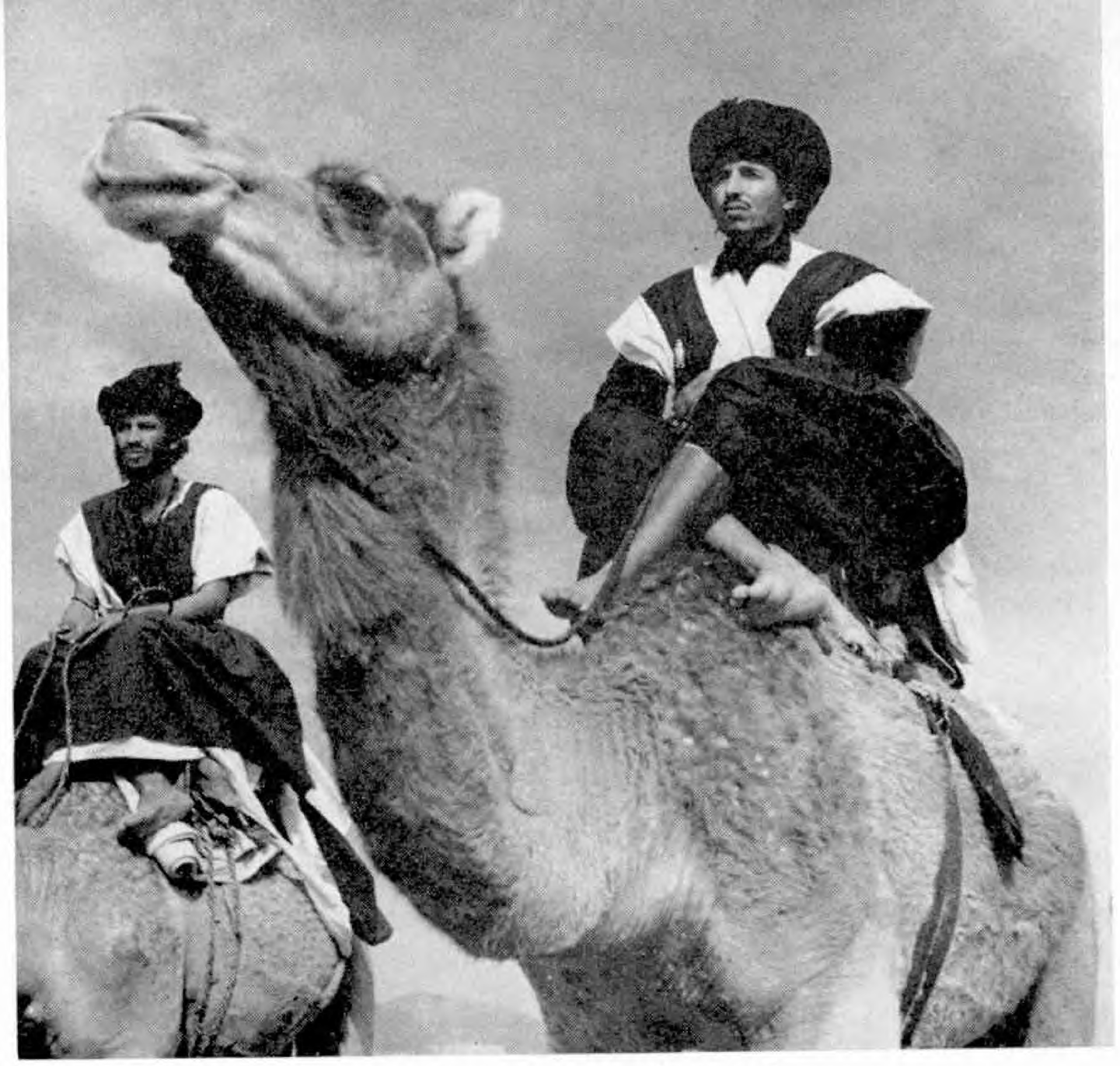
Left: See 250 Exposures
Right: See Figurehead Fashions





Boxing cleverly (3)

In the last of his present series of articles on how to take good photographs with a simple box camera, R. H. Mason, F.I.B.P., F.R.P.S., Editor of Amateur Photographer, *tells you how to compose the sort of photograph that wins prizes. There will be a Meccano Magazine Photo-competition for you to enter later in the summer—probably when you come back from holiday with your cameras full of pictures.*



A low camera angle often makes a more striking photograph

Composing the picture

WHETHER IT'S a painting or a photograph, any picture needs a focal point of interest. Look at a few pictures and study them. You'll soon see what I mean. If your photograph is a portrait, composition is not such a problem. After all, the sitter will be the chief attraction, and you will be able to place yourself where you want in relation to him. But a landscape with a lot of detail will not be so easy unless you choose a definite object, say, a haystack or a house or a tree to be right in the foreground. In a seascape, get a boat or a rock on a large enough scale to catch the viewer's eye first.

In thirds

Remember, it is not a good thing to have the principal object or focal point right in the dead centre of the picture. Try and get it in what is called 'the intersection of thirds'. What this means is that you should imagine your picture divided into three parts horizontally and three parts vertically. Right? Now there will be four points where the lines cross. One of these will be the best as a focal point. The horizon on landscapes and seascapes should be along one of the horizontal lines: never along the middle. Remember your picture is cut in three, so to speak, not in halves. A strong vertical feature like a figure or a tree—or a lighthouse—should be on one of the vertical thirds, and, if it is a figure, the eyes should be on the upper point of interesection.

If you are photographing two or more people together never just stand them side by side. In this way they divide the interest. Place one in front of the others so that he or she becomes the focal point.

What's your angle?

If you choose unusual viewpoints your pictures are likely to be more artistic and original. Try kneeling on the ground when you are photographing a friend so that you have to shoot upwards and your friend is outlined against the sky. A low angle is frequently a help for more striking landscape photographs. And what about high angles? You can often get surprising—and surprisingly good—pictures from a higher than normal viewpoint. Try standing on a ladder or a wall.

A way of finding good pictures is to take a postcard with an oblong cut in it when you go for a walk or a bike ride. Hold the postcard up and frame the view. If you look at it with half-closed eyes you will get a fair impression of how the scene would look in black and white. Then try and see if it would be better taken from a high or low angle. A lot of very fine photographers have first learned to compose their pictures in this way.

Now go out and look for pictures. Cultivate the habit of seeking the unusual; the reflection of a mountain in a lake—or a cathedral spire in a puddle—keep looking, and finding.

On the Move

SHIPPING
AIRWAYS
ROAD AND TRACK
RAILWAYS
SPACE TRAVEL

Stars and cars

by Jerry Ames

AFTER THE last war Grand Prix personalities assumed as much importance as cars, and came to be feted like film stars. True, before the war there were legendary figures like Nuvolari, Varzi, Caracciola, Lang, Chiron and Seaman, some of whom were still alive when racing resumed in 1946. Not only were they older by six years, but they had been away from the game too long to take up the sport from where they left off.

Now it is a curious fact, that if you take a top driver away from Grand Prix racing for more than a year, he will never again be able to race with the same inspired skill as before. So although Nuvolari, Varzi, Chiron and Caracciola tried to resume racing, their driving lacked the fire of pre-war days. They found it harder to compete against newer drivers, who although lacking in experience could often put it across them. One veteran who failed to reach his peak before the war was Guiseppe Farina. So numerous were his crashes, he is reputed to have broken almost every bone in his body. Now he began to drive like one inspired, winning race after race in a supercharged 1½ litre Grand Prix Alfa Romeo. Farina, who matured as a Grand Prix driver only after the war, became the great stylist. His relaxed arms-stretched driving inspired many newcomers, and he also became the first official World Champion under the new rules.

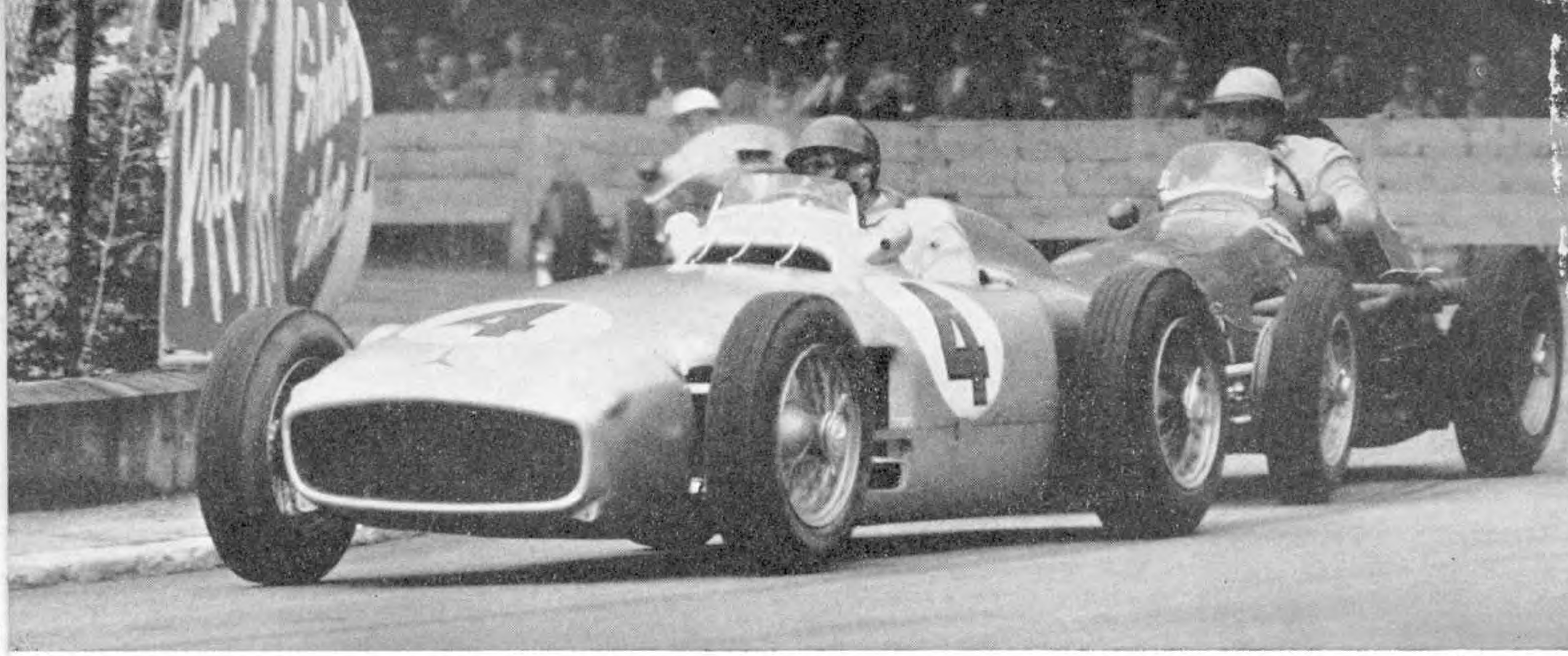
Grand Prix racing too, has changed. Whereas in the old days it had a small, but knowledgeable following, except in France and Italy, where, aided by good newspaper publicity, it had always appealed to the man in the street; now with so many more people driving cars and wanting to drive fast, motor racing has become a popular sport.

Before the war, new drivers would ask where can I race? Today with so many new circuits and races, it is not so much a question of where, but how much will I be paid for racing? Like other top sports, Grand Prix racing has also been affected by the growth of commercialism, this in turn focused bigger interest on motor racing, leading to world wide publicity in newspapers, magazines, on television and radio. Where once an important Grand Prix would only merit a small paragraph if there was a crash, today most newspapers report the results and give some details of any important race, irrespective of crashes; this much have we progressed. Whereas, once, Grand Prix cars were the centre of attraction, today it is usually the drivers. They travel all over the world to race, and enjoy incomes even higher than that of a Prime Minister.

This situation arose directly from the FIA decision to instigate the Drivers' World Championship, which has done more to glamourise motor racing than any other scheme. From its office in Paris, the FIA, World governing body of motor sport, decreed that the major Grand Prix of each country should count towards the Drivers' World Championship, as we saw earlier, the first to take this award was Farina in 1950, followed by Juan-Manuel Fangio, Alberto Ascari, Mike Hawthorn, Jack Brabham, Phil Hill, Graham Hill and for the current year Jim Clark. Regrettably, Stirling Moss never became Champion, although as an all-round driver of Grand Prix and other racing cars he was probably superior at the wheel to some who became World Champions. Since 1958 there has been a Grand Prix Constructors' Championship, first won by Vanwall.

The greatest champion

No one will dispute that the greatest Champion Driver of all was Juan-Manuel Fangio, the Argentinian who five times became World Champion; even today, in retirement, his advice is frequently sought. In my opinion, Fangio is more than just a legendary driver; he is a great sportsman and a diplomat such as one rarely meets. Fangio has patience and persistence, he



1

had to wait until he was more than 30 years of age before getting a chance to drive for one of the top European teams—Alfa Romeo; that was in 1950, the following year he captained the team and achieved his first World Championship.

Completely different in his approach to racing, was happy-go-lucky Mike Hawthorn, more temperamental, but a very great driver. When Mike was on form he was the equal of any man racing, including Fangio, but Mike's biggest problem was that until he sat behind the wheel he could never tell whether he was on form. I have never known any driver so influenced by the tune of his motor car as Mike Hawthorn, when his car was right, he became a part of the machine and there was no holding them.

The longest run of any formula for Grands Prix, certainly in post-war years, was the engine limit of 2½ litres unblown, introduced in 1954, which produced some excellent racing by Mercedes, Ferrari, Maserati, Vanwall and Cooper. In 1961 it was replaced by an engine limit of 1½ litres unblown, this has been a period of British domination, although Ferrari were Champions during 1961. Then it was the turn of BRM, and Lotus powered by Coventry Climax V-8 engines.

What of the future? If Ferrari is *really* ready with his V-8 engine and later in the year with his V-12, Grand Prix Formula One this season will provide some extremely hotly contested races, especially bearing in mind that there will be new models from BRM, Lotus and Cooper, with more highly developed Brabhams.

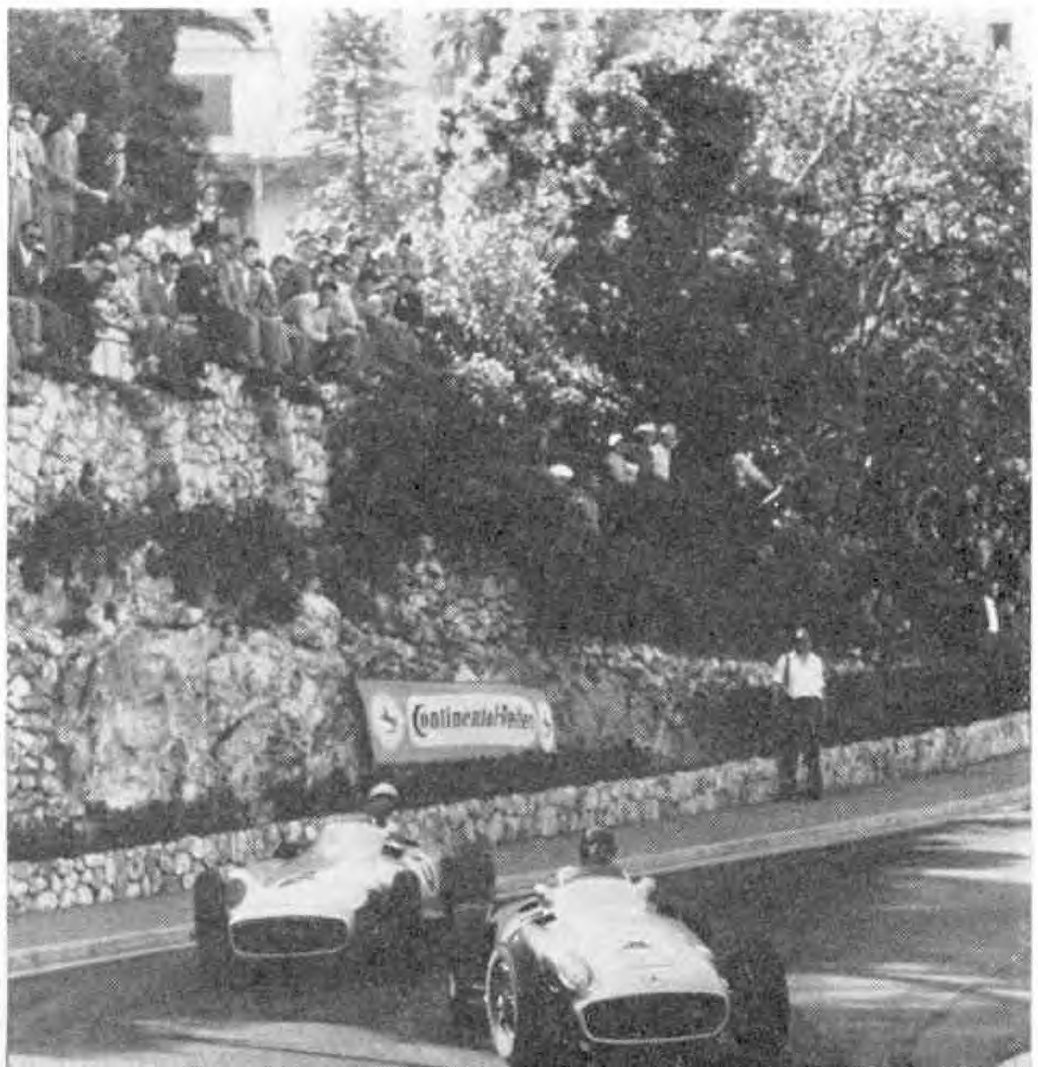
Japanese challenge

At the moment the scales are weighted in favour of one nation, which is always a bad thing in sport, but the new V-12 Japanese Honda will probably make its first appearance at Monaco this year or in the Belgian Grand Prix. For the future BRM is constructing a new four wheel drive Grand Prix machine, using Ferguson principles, while Lotus is experimenting with fully automatic transmissions.

There is also every likelihood of Ford from America appearing in Grand Prix racing; the firm has already built a V-8 Formula 1 machine at Detroit. The Formula is due to change again for 1965, this time permitting unblown 3 litre engines as well as 1½ litre supercharged. This is where I expect the Americans to enter Grand Prix racing, but I think you will find they may be challenged by a new Mercedes-Benz, as well as some interesting new British machines, already at the drawing board stage.

After nearly 60 years the Grand Prix can look forward to a very healthy future.

2



1 Fangio, Mercedes, and Gonzales in a Ferrari, round a corner in the Swiss Grand Prix of 1954.

2 Fangio leads Moss in the 1955 Monaco Grand Prix—both in Mercedes.

Air News by **John W. R. Taylor**

New planes for old

DURING THE past five years most of the world's major airlines have re-equipped with jet airliners. This is fine for the passengers, who now reach their destinations more quickly and in greater comfort. But the airlines have been faced with the difficult problem of what to do with the piston-engined airliners that the jets replaced.

Some of these aircraft were almost new, and smaller airlines and charter companies welcomed the opportunity of buying them at bargain prices. Others were kept by their original owners and fitted with big freight loading doors in place of the usual passenger doors, so that they could be used for cargo carrying. This extended their useful life, but nobody pretended that these converted piston-engined airliners were as efficient as the latest specially-designed freight planes with nose or tail loading doors for quick and easy handling of bulky loads.

Then, the design team of Aviation Traders Ltd, a company based at Southend Airport, had a bright idea. For many years, one of Aviation Traders' main jobs had been to service and repair the transport aircraft owned by its associated companies, Air Charter Ltd, and Channel Air Bridge. Among the types that passed regularly through its workshops were Douglas DC-4 Skymaster airliners and Bristol Freighter car ferry-planes; but neither of these aircraft was really big enough for the new services being planned by their operators.

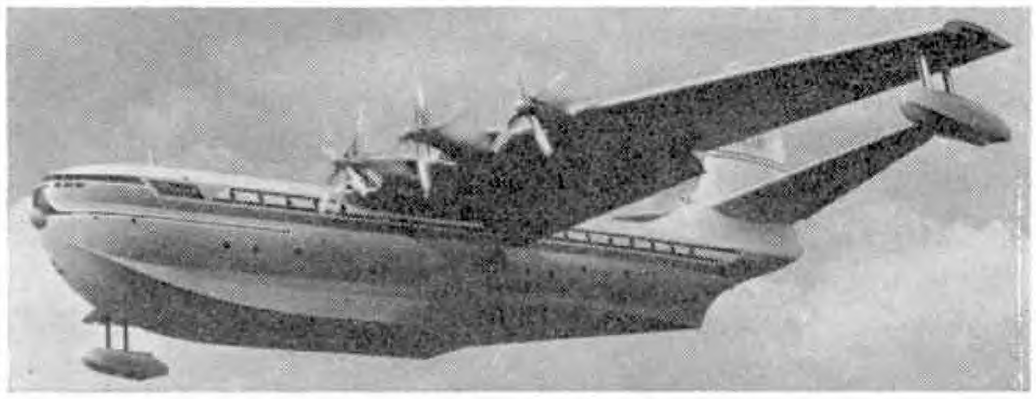
Air Charter was able to supplement and replace its DC-4s with larger types like the Britannia; but Channel Air Bridge could find no suitable new machines for its vehicle ferry services at a price it could afford to pay. The DC-4s that Air Charter no longer needed were big enough and fast enough for this work, but motor cars could not be loaded and unloaded through their small side doors. For quick turn-round on air ferry routes 'straight-in' nose or tail loading was essential, and it seemed a pity that the noses could not be cut off a few old Bristol Freighters and stuck on the front of the DC-4s!

This was not possible; so Aviation Traders decided to try the next best thing by building a completely new Freighter-type nose on to one of the spare DC-4s. With the help of Douglas Aircraft, makers of the aircraft, they designed a huge bulbous nose section with a sideways-opening door at the front and with the pilots' flight deck high enough for cars to be driven into the cabin beneath it. To ensure directional stability in flight, the tail fin and rudder had to be enlarged to 'balance' the new nose. No other changes were made to either the aircraft or its four 1,450 hp Pratt and Whitney Twin Wasp engines.

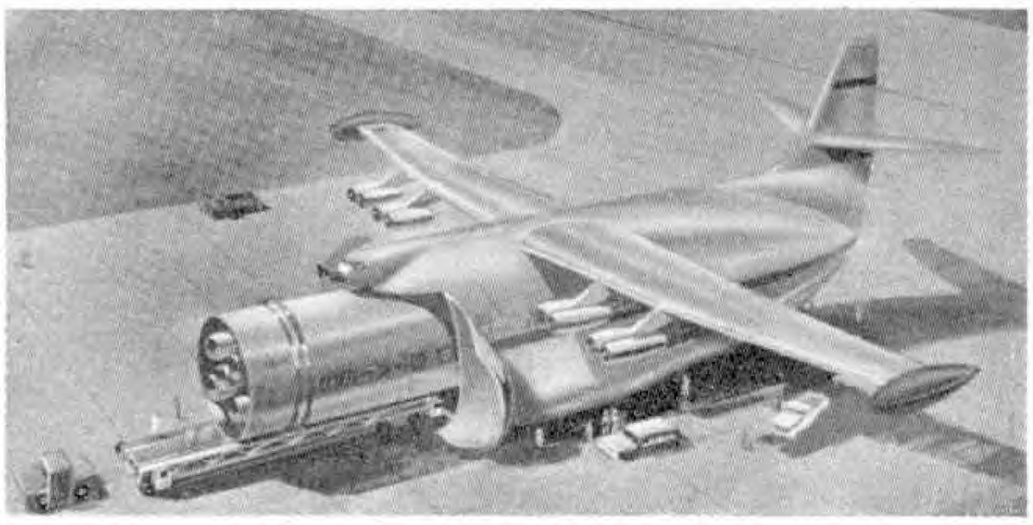
When the prototype was completed, it was hardly the most handsome of aeroplanes, but it was the answer to the prayers of Channel Air Bridge, with a range of around 2,000 miles at 204 mph, carrying five cars and 22 passengers. Flight testing began on June 21, 1961, and soon showed that there was nothing wrong with the aircraft's handling qualities. Renamed the ATL.98 Carvair (Car-via-air) it entered service in 1962. By then, Channel Air Bridge had been combined with Silver City Airways to form British United Air Ferries, and today Carvairs play an important part in the cross-Channel operations of this company, carrying vehicles and passengers deep into Europe on its popular long-range services. Others have been bought by Aer Lingus, Interocean Airways of Luxembourg and Aviaco of Spain.

Meanwhile, even more startling things have been happening to a Stratocruiser airliner over in America. A company named Aero Spacelines Inc., of Van Nuys, California, managed to buy up 25 ex-airline Stratocruisers at knock-down prices and decided to see if some of them could be turned into freight-planes big enough to carry sections of America's biggest space-rockets. This was rather ambitious, as parts of the Saturn rocket are so big that they cannot be transported by road or rail and the National Aeronautics and Space Administration (N.A.S.A.) has had to build a special barge to take them by water from where they are made to where they are assembled for launching.

Aero Spacelines gave the On Mark Engineering Company a contract to build a new 'bubble' cabin, large enough to house a section of the Saturn, on top of the cabin of one of the Stratocruisers, and to lengthen its fuselage by



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16 ft 8 in to 127 ft. At first, they left the original cabin roof in place inside the 'bubble' and the aircraft flew for the first time in this form on September 19, 1962. Sixty hours of flight testing proved that it was stable and controllable under all conditions; so the conversion was completed in the spring of 1963. This involved removing the original cabin top, giving an inside height of over 20 ft compared with the former 9 ft. At the same time, the whole rear fuselage was made removable, from a position just behind the wing, so that rocket sections can be loaded straight into the cabin.

Rocket ferry

Since last July, this strange-looking aircraft has ferried many Saturn components between Los Angeles and Cape Kennedy. It has also transported the first Rocketdyne F-1 rocket-engine which develops one-and-a-half million pounds of thrust and will power the advanced Saturn used to take the first American astronauts to the Moon. Aero Spacelines claim that its cabin volume of 29,187 cubic feet is greater than that of any other aeroplane in the sky; but they are planning an even more remarkable conversion job. This will involve changing one of Britain's 140-ton Princess flying-boats into a landplane with eight podded turbofan engines and an enormous fuselage with an inside diameter of 38 ft. However much one may regret seeing such a graceful aeroplane turned into the fattest aircraft in the world it is good to think that it may be put to some use after years of idleness and wasted opportunities.

1 The Princess flying boat.

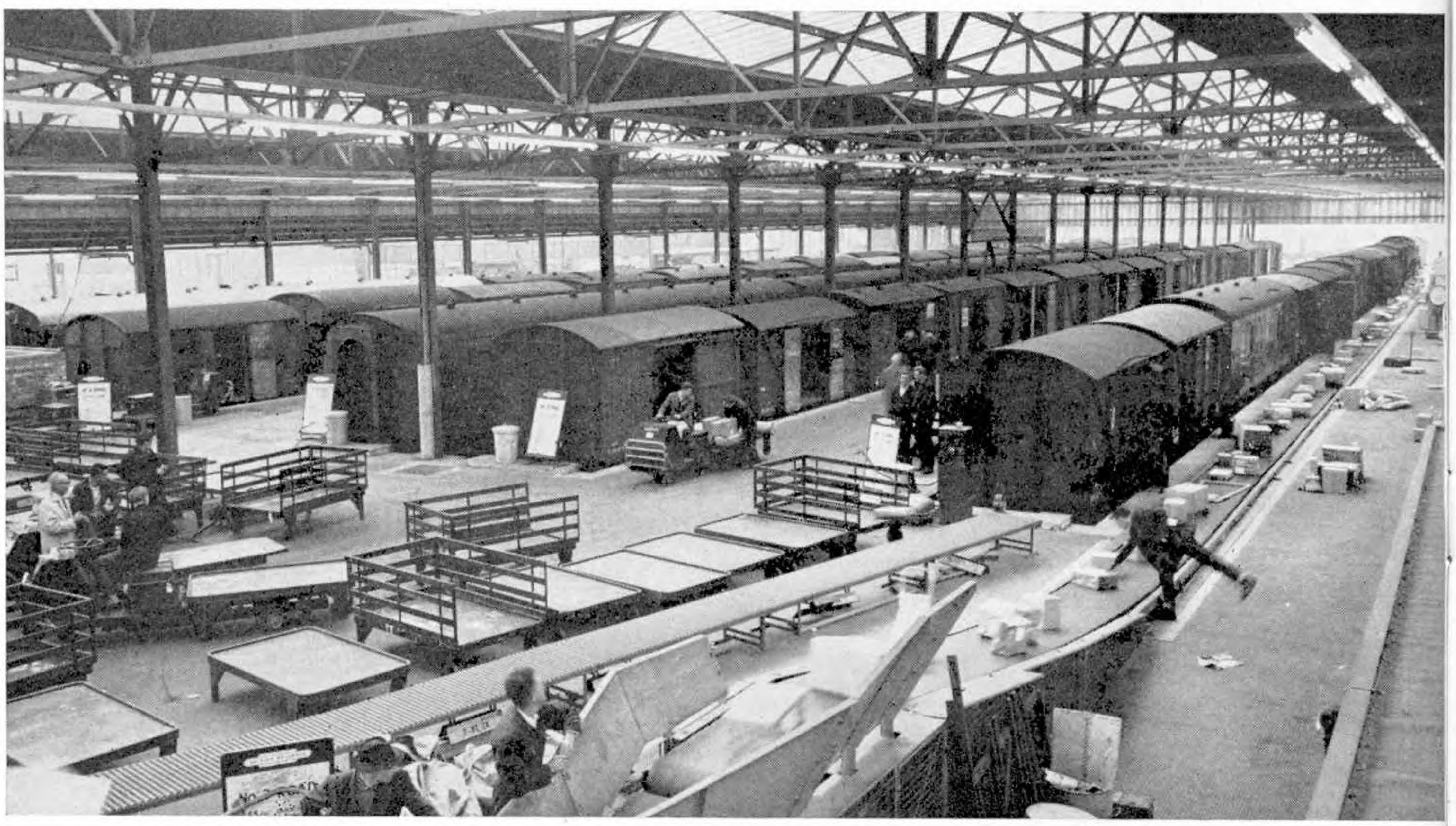
2 Proposed conversion of the Princess for carrying large rockets.

3 A standard Boeing Stratocruiser airliner.

4 Stratocruiser being converted into a rocket carrier for Aero-Spacelines.

5 Douglas DC-4 before conversion into a Carvair by Aviation Traders.

6 Vehicles being loaded into a Carvair.



1

STARTLING NEW developments are taking place on British Railways every day. Steam locomotives are being replaced by more economical diesel and electric locomotives in all regions. In the North Eastern Region, 90 per cent of all traffic is diesel-hauled. Electric locomotives run regularly between Liverpool and Nuneaton, and British Railways hope eventually to cut the present time of about four hours between Liverpool and London to just under three hours.

Modern methods and techniques are being used increasingly. There is closed circuit television on an inspection train in the London Midland Region. The equipment is installed in a special three coach train and is used for inspecting overhead electrical equipment.

The centre of this train contains two television cameras which relay pictures on to 14 in monitors installed in the observation coaches, placed at each end of the camera coach. One camera is fixed to view measuring instruments mounted on the roof and the other, on a pan and tilt mechanism, is remotely controlled by the operator using a joy-stick control similar to that used on aircraft. In addition to the comprehensive electrification work—erection of overhead equipment and gantries, etc.—that is continuing on the Rugby to Primrose Hill Tunnel, London section of line, it is also expected that 1964 will see the completion of work on the permanent way and platform works at Alt Hill Park, Northampton, Blisworth, Wolverton, Bletchley, Leighton Buzzard, Cheddington, Berkhamsted, Watford Junction, and Willesden Yards and station area. Work is also proceeding on the reconstruction of a number of station buildings which it is intended to complete by the time the electrification scheme is fully operational. The stations affected will be Wolverhampton, Bletchley, Tring, Berkhamsted, Hemel Hempstead, Watford Junction and Harrow and Wealdstone. It is also intended to remove most of the main line station buildings at Willesden Junction. London will see the reconstruction of four over-bridges near Euston Station. No. 4 bridge on this line will be completely removed. Camden Motive Power Depot is to be converted to a carriage stabling depot in the very near future. Also to take place shortly is the reconstruction of Birmingham New Street which is to have its track and platforms completely re-modelled, and the station buildings rebuilt. The station is also to have a new power signal box which will be virtually completed early this year.

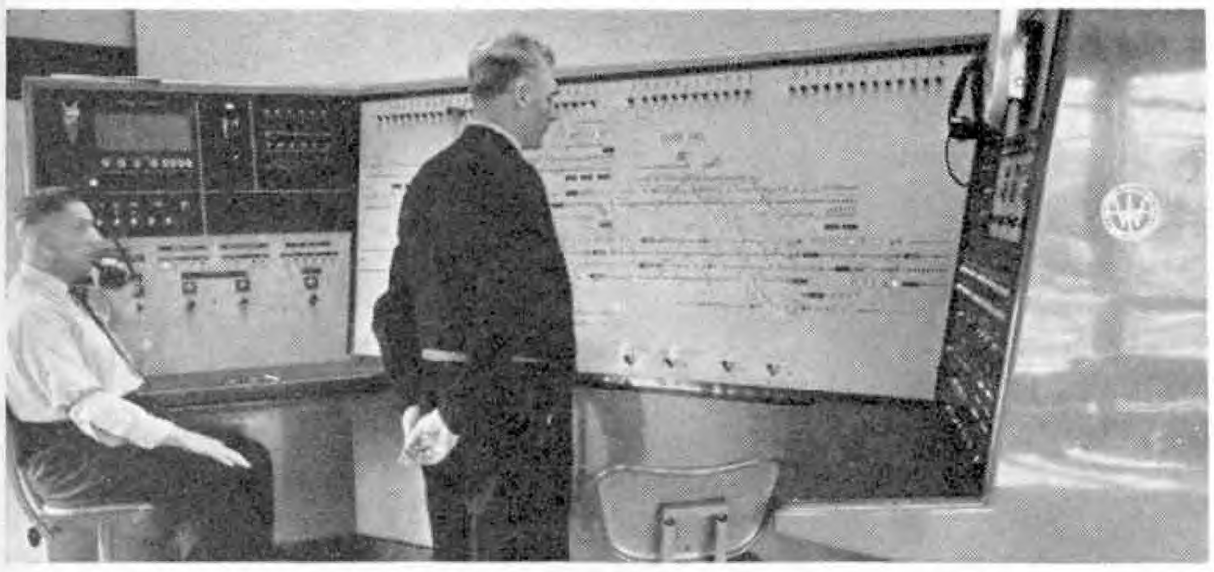
Other major civil engineering works which are almost finished are those connected with the electrification of the Trent Valley Line.

In Cheshire, a new modern signal box and associated signalling has been brought into use at Bramhall sidings to give greater controlling facilities for a petrol storage depot.

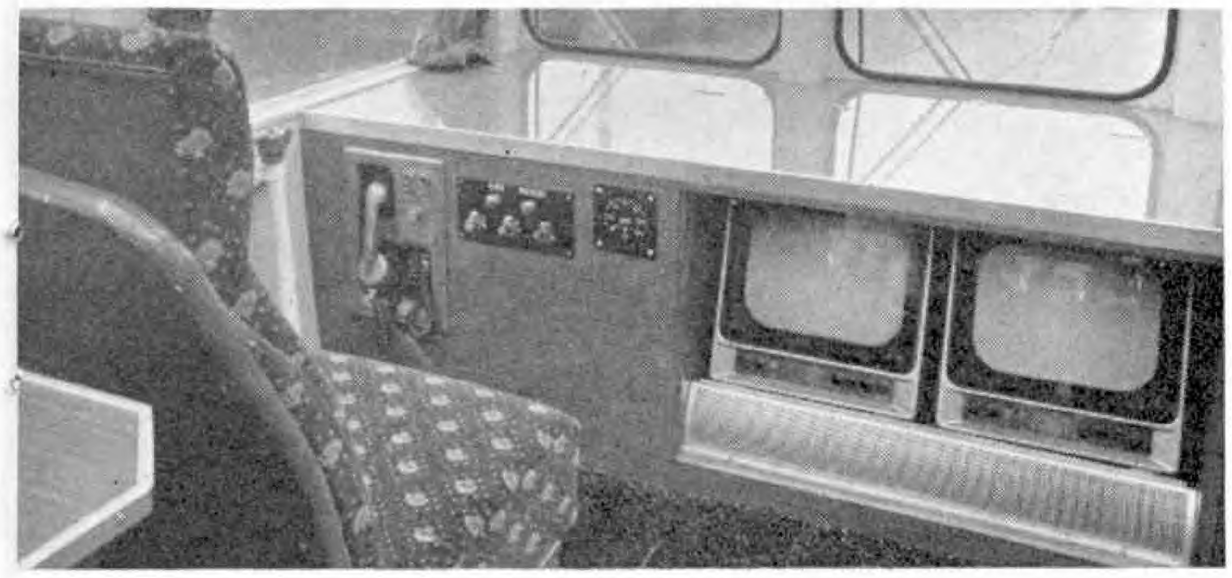
It was recently announced that it is intended to install continuous welded rails on many parts of the route between Liverpool and Euston, and this will no doubt coincide as closely as possible with the civil engineering works that are being carried out in places along the line. The North Staffs line, for instance, has been progressing for some time, and 1964 has seen the start of the work on two of the major projects remaining—the remodelling of

BRITISH RAILWAYS' great leap forward

Did you know about closed circuit TV on an inspection train? How much freight of all kinds is carried by British Railways every year? What is 'merry-go-round' working? **Michael Rickett's** article gives you the answers to these questions—and to plenty of others about railway modernisation.



2



3

1 The new rebuilt Wavertree Parcels Depot, at Liverpool, showing the shed that will eventually be the railhead for a large area. New equipment has been installed and a conveyor belt, for carrying parcels from the train to the vans, can be seen in the right.

2 A view showing the new route-setting panel of Edge Hill Signal Box, Liverpool. The control desk is designed to supervise 170 routes. Situated at the top of the desk are control switches for new emergency operation of the electro-pneumatic points.

3 An inside view of the London Midland Region inspection train, television monitors in the foreground.

Stoke Station track and the construction of the new Harcastle Tunnels diversionary line.

British Railways are continuing to dispose of infrequently used stations; the existing main line network will eventually be simplified and the equipment used on the main line routes improved. British Railways also intend to cut unnecessary or duplicated existing main line routes, and make savings by eliminating trains performing the same journey over different routes.

When it is realised that British Railways carry more than 250 million tons of freight, of all kinds, every year, and that the coal mines load 150 million tons of coal into British Railways wagons every year, you will understand that a large saving in the cost of carrying coal from the mines to the local dealer will be gained by setting up a coal concentration scheme later this year. This will dispose of the uneconomic two or three-wagon coal yard. Coal can, instead, be shipped in train loads. New techniques are being introduced for automatically loading and discharging full trains. This is called 'merry-go-round' working, a system involving a pit head crusher and bunkers, with conveyors linking them, and, beneath the bunkers, two sidings for trains to pass through, pausing on the way to load. At the unloading terminal—power station or port, steel works or depot—coal will be automatically discharged into the hoppers beneath the wagons, and on to a conveyor belt which will carry it to its destination. This will replace the present day pit head with the hundreds of sidings taking up to 250 acres. involving an inordinate amount of shunting empty wagons and brake vans, reshuffling full wagons, and so on.

The pit of the future, it is envisaged, will occupy only four acres, and contain only two sidings.

Buses by **David Kaye**

Golden Jubilee at WEST BRIDGFORD

In the whole of England only two urban district councils operate their own bus services. These are Ramsbottom, and West Bridgford, Nottinghamshire. This year, West Bridgford Passenger Transport Department celebrates its golden jubilee.

FIVE DENNIS double-deckers came into service within West Bridgford's urban council area in 1914. Now the fleet consists of 28 vehicles in cream and maroon livery. The move to start the service began in 1908 when the Midland Railway Co. refused to accept a petition from local residents appealing for a railway station in their town.

Then, in 1911, a horse bus service, owned by a Mr. Hines, ran from West Bridgford Baptist Church to St. Peter's Church in Nottingham. The following year, Nottingham's city fathers announced their intention of running trolleybuses into West Bridgford, doubtless encouraged by the success of similar experiments with 'trackless trolleys' in Bradford. But the independent people of West Bridgford would have none of the Nottingham plan, and forced through an Act of Parliament to enable their own council to operate buses.

Nottingham retaliated by not allowing West Bridgford buses beyond the tram terminus at Trent Bridge. This handicap existed until 1927, when another Act of Parliament allowed a joint service between the two municipal undertakings. For the past 37 years this has been the system. Nottingham takes all the fares for journeys within the city limits, and West Bridgford taking all for journeys within their boundaries. Through fares are shared on a fifty-fifty basis. So city buses cover within West Bridgford a mileage equal to that travelled by the urban council's vehicles within Nottingham. At present there is only one route operated by West Bridgford which is entirely within the urban council's area. This is route 1.

During the First World War, the urban council's service ceased, as the War Department requisitioned all its five buses. The new 1919 fleet consisted of two Straker-Squire double-deckers, and seven Allday chain-driven double-deckers. In the late 1920's, fast single-deckers such as the Leyland PLSC Lion were used, and later, West Bridgford took delivery of six AEC Renown single-deckers. Even later, an AEC Regal with a Willowbrook body was operated on route 1. However, more recently West Bridgford has been a 100 per cent. double-decker service.

For a few years before 1934, two London NS type buses were in service. Allegiance to Southall has been firm and their products have had long and successful lives. Certainly, as late as last New Year's Eve, a 1938 Regent 1 (No. 12 ENN 700), was still in service.

The oldest bus in the current fleet is No. 4 (FNN 102), a 1939 Regent 1, which started its life as an H56R bus. In 1953, the department's workshop converted it to L52R in order to work on the new 61A route to the huge Clifton Estate. (With a population of 25,000, and no fewer than 22 schools, Clifton is the biggest such estate in Europe).

Along Wilford Lane is a low bridge with 13 ft 9 in headroom. Car 4 has what must be an unique seating arrangement, since her original twin seats have been clipped together as quartets. No. 4 has since been joined on the Clifton route by two Daimlers from Huddersfield (where they were Nos. 217 and 219). They were bought in 1955.

Of the fleet's total strength of 28 vehicles, 24 are used at rush hours, although only eight are needed during off-peak periods. The four off each day consist of two spares, one in dock and the other in semi-dock.

In the financial year, 1962-3, West Bridgford buses covered 745,988 miles, and 6,418,000 tickets were issued. Mileage was down by 2,000 on the previous year's working, although ticket issues were up by 12,000. Gibson ticket machines are used.

Every operator has endearing eccentricities. I suppose anybody who has ever seen a West Bridgford bus will recall with a smile the enormous size of the route blind numbers. These are 19 in tall on the older vehicles, but a mere 16 in on more recent stock. I gather that the colossal stature of these figures enables short-sighted people to hail a bus in good time. I asked why there was no car No. 37 in the fleet. The reason is because odd-numbered buses and even-numbered ones are thoroughly cleaned on alternate days. In 1963 it was essential to have two-even-numbered buses to keep the balance. Extra fittings include a coat hook for conductors, a vertical bell strip on the platform to suit conductors of all heights, and uncollected fare boxes on *both* decks. These last collect up to £30 a year.

To celebrate their golden jubilee, West Bridgford have hired Portsmouth's famous Thorneycroft No. 1, which is on display in the car park near the Abbey Road Depot in June. For 1s 3d you can buy one of the special illustrated time-tables from the general manager at Abbey Road, West Bridgford, Nottingham.

On its very last day of active service, West Bridgford No. 12, a 1938 Regent 1, at its Nottingham terminus.



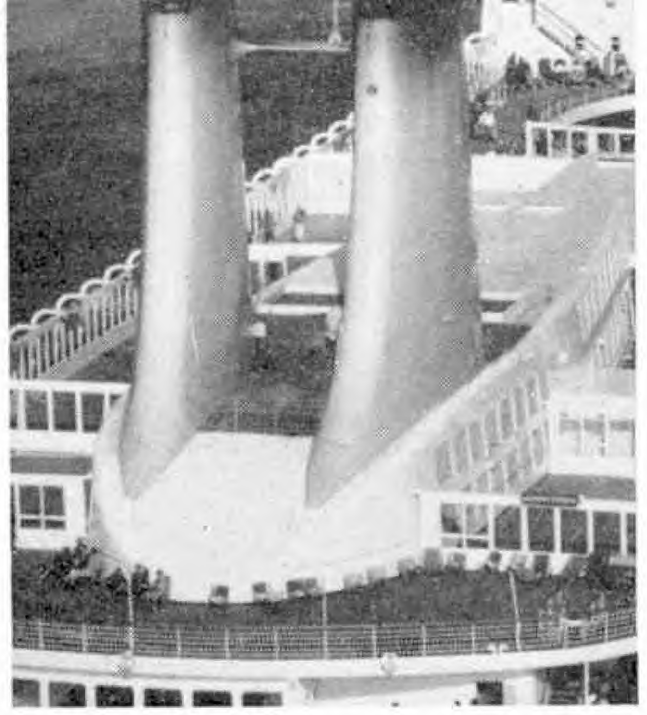
FLEET LIST

Vintage	*Fleet No*	*Reg No*	*Chassis*	*Body*	*Seating*
1939	4	FNN 102	Regent I	Park Royal	L52R
1945	24/7	CCX 777/9	Daimler CWA6	Duple	UL55R
1945	25	GNN 410	" "	Brush	UH56R
1947	2	HNN 772	Regent III	Park Royal	H60R
1947	3, 17/8, 20	HNN 773-5/7	" "	" "	H56R
1947	19 (+)	ACP 421	" "	" "	H60R
1949	5/6 & 22/3	KAL 684-7	" "	" "	"
1954	11 & 21	ORR 139/40	" "	Willowbrook	L55R
1955	28-30	TRR 651-3	" "	Park Royal	H61R
1958	31-33	XVO 329-31	" "	Reading	L59R
1960	34/5	334/5 GNN	" "	East Lancs	H63R
1962	36/8	136/8 NAL	" "	" "	H65R
1964	39 & 40	639/40 UVO	" "	" "	

Note: (+) = Until Jan. 63 ran as Halifax No 47.

Shipping by
Robert Gore

The long and the short and the tall . . .





Left: The twin funnels of the 'Canberra'. *Right:* Owners initials OAM on the funnel of the 'Ortrud Muller'

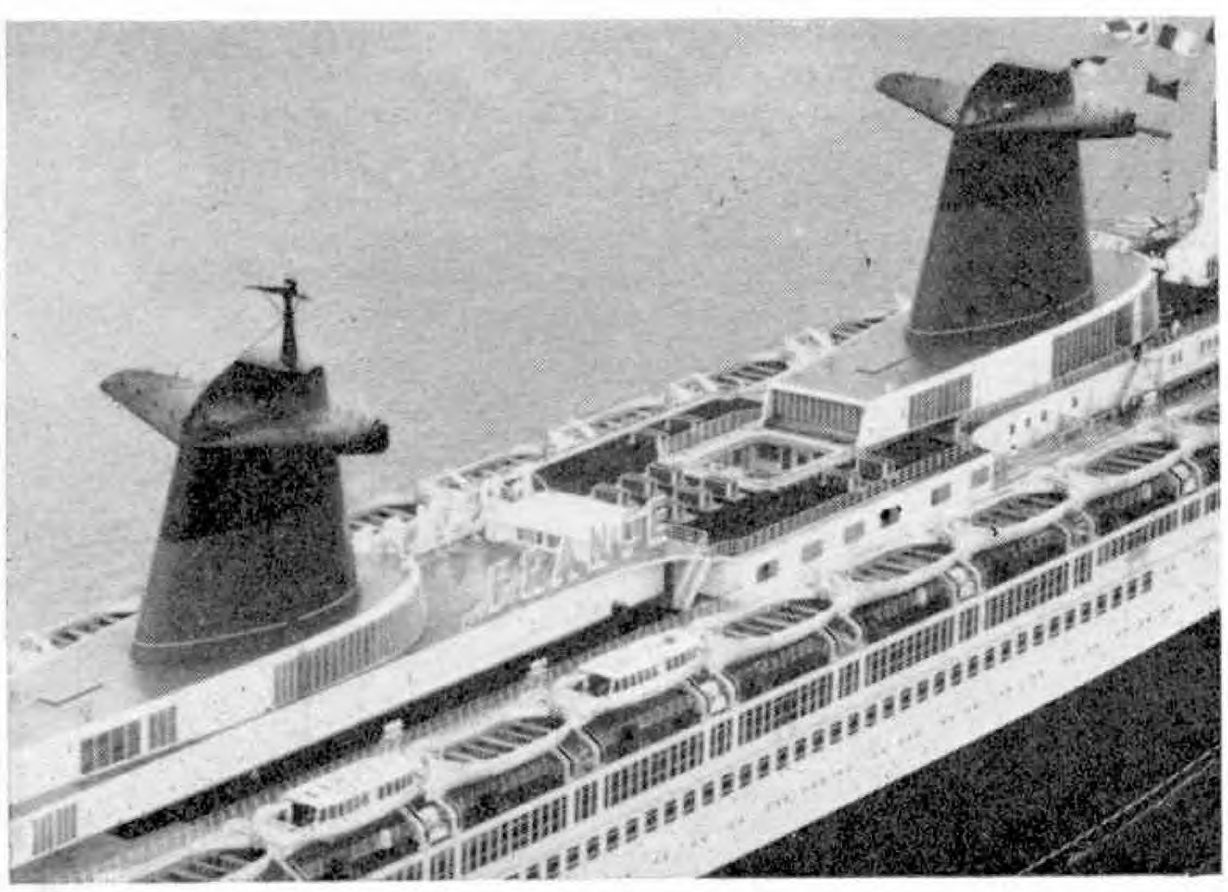
SHIP FUNNELS come in all sorts of shapes and sizes. In relation to their diameter, modern funnels are not so tall as their old-fashioned predecessors when a good draught was demanded by coal-fired boilers. With the advent of the motorship the old type was no longer required because merely a small exhaust pipe was necessary. However, in order to preserve an essential characteristic, funnels continued to be fitted. Ships *must* have funnels (they look very queer without) but there are some quite large vessels with none apparent.

The old smoke-stacks were in themselves entirely functional but this is not quite so true of later streamlined versions that are a façade consisting of a prefabricated structure dropped into position by a shipyard crane. A shapely exterior formed in light metal alloy (to reduce top-heaviness) often hides a group of unattractive exhaust pipes and ventilating shafts, water storage tanks, drying rooms, etc. Taking a bird's-eye view of the top of a funnel you could see it covered with a flat plate through which small pipes protrude.

The funnel is situated above the engine room which, traditionally, is placed amidships. For various reasons, however, there has been a trend in recent years to put the engines aft, the funnel following suit.

As a means of identification of a particular fleet funnels assist, for merchant ship owners choose to paint theirs some distinctive colour scheme or device, perhaps embodying a replica of their house-flag. Some are wholly painted in one colour but more usually there is at least one more contrasting colour in the form of a band which, if it is at the top, is normally black so as to hide smoke discolouration. Ships in one ownership may also have funnels of a uniform and characteristic shape that aids identification and gives individuality at the same time. On a clear summer day a few years ago I was looking across the Strait of Dover when I saw what appeared to be two small red objects on the horizon. From my position some 15-20 miles away and through binoculars I could plainly see they were the twin funnels of one of the giant Atlantic liners, the *United States* but owing to the curvature of the earth the superstructure and hull could not be seen.

The winged funnels of the 'France'



Funnels aft

Changing fashion and streamlining have altered the profiles so considerably that now they sometimes become part of the superstructure. Particularly in passenger ships there has always been the desire to obviate the tiresome sooty smuts soiling the open decks. The placing of funnels aft has to some extent helped to overcome some of the difficulty and at the time of her construction in 1955, the Shaw Savill liner, *Southern Cross* (20,204 tons), was then the largest passenger vessel with a funnel so positioned. This was regarded as being a somewhat revolutionary departure, but whereas she carried one funnel, the later *Canberra* (45,733 tons) boasted a pipe-like pair side by side. Another modern liner, apparently with two funnels, is the Orient Lines' *Oriana* (41,915 tons) but the after one is a ventilator to the engine room below!

High winds cause phenomenal turbulence to the leeward of objects and scientific design coupled with wind tunnel tests have resulted in aerodynamic shapes that at first sight may appear to be extraordinary but not aesthetically ridiculous. Perhaps the most prominent are those of the French Line's *France* (66,348 tons) which have 'wings' to each of her 54 ft high funnels through which exhaust gasses are emitted. They were fitted after extensive tests to ensure that as far as possible smoke should clear the decks in all states of the wind.



Typical tench water . . . a quiet corner of a pool, edged with rushes and lily pads. The angler has chosen his spot well. Tench love the weeds, and the bushes and sloping bank form a background which makes the angler less visible to the fish.

by **John Crossman**

Start the season in still waters

STILL WATERS often give better sport than rivers during the first few weeks of the coarse fishing season, and this is one reason why many anglers at this time concentrate on catching the carp and tench of lakes and pools.

By early summer, tench and carp are usually fighting fit, whereas roach, chub, and bream in rivers are frequently listless, not having recovered fully from spawning.

The tench angler is more certain of consistent reward than the carp angler, and anyone who has yet to land a reasonably hefty fish—one over 3 lb, say—should soon put the record straight if he makes a few outings to a good tench water. Early morning and late evening are the most productive times for tench, for they seem to have set feeding periods outside of where only occasional fish are caught.

Many anglers regularly start to fish for tench as dawn is breaking. It is worth the effort, if only to savour the dew-covered freshness of the awakening countryside, but I must confess that more often than not when I have been out in a punt at first light I have had to wait until about 7 am for my first tench. In warm, settled weather most of my fish have come between 8 am and 10 am and from 8 pm to dusk.

When tench are feeding they root in the bottom mud and send up trails of bubbles which reveal their presence.

I have found that 'trail groundbaiting' and dragging the swim with a rake before fishing help to attract tench. The term 'trail groundbaiting' is almost self-explanatory: small balls of groundbait are thrown into the water to form a series of 'paths' all leading to a central pitch where the groundbait is concentrated.

Dragging a swim serves three purposes. It clears weeds from a swim which otherwise would be impossible to fish, and it colours the water and releases a harvest of natural food. Don't worry about the disturbance (unless there are other anglers nearby who might object to your activities). I have caught tench within 20 minutes of the completion of dragging operations in a weedy canal.

On some tench waters a long-handled rake is kept in the boathouse for the convenience of anglers. If a rake is not provided, it will pay the angler to make his own drag—the head of an old garden rake, weighted by an assortment of scrap iron and secured to a strong rope, will serve the purpose. When boat fishing, try to avoid jarring noises—and remember to take along a cushion and a pair of polariod glasses or sun glasses. A wooden seat feels uncommonly hard after being occupied for a few hours, and the silver glare of wind-rippled water can become a strain on unprotected eyes.

Keeping it trim

by **Bill Oakley**

LOOK AFTER it. You've got a bike, and a good bike is a fine piece of machinery, so it will need proper care and maintenance. Not only the good running of the machine, but your safety, depend on keeping your bike in good order. Care for it as if your life depended on it because it may.

First of all, a few notes about cleaning. For the chromium parts, wipe off dirt with a rag that has been dipped in warm, soapy water; then polish lightly with a clean dry rag using just a spot or two of oil. *Never use metal polish or soda.* For the enamelled parts first clean with a wet rag, then polish with a clean soft cloth. Clean your machine once a week and it will continue to look like new for ages.

Now, lubrication. Use a thin lubricating oil once a fortnight, or every 200 miles. Hubs and bracket bearings are usually fitted with lubricating holes. See that the covers are replaced after oiling to keep out dirt and wet. As well as oiling the chain (only on the inside run) and all bearings, put a spot or two on the brake swivels and the ends of the brake cables. For the head bearings, which are where the front fork joins the stem that holds the handlebars, you will have to turn the bike upside down if no lubricating holes are provided.

Adjustment

Wear and tear mean that frequent attention to the brakes and all moving parts of the machine is absolutely necessary. When testing the brakes, if the lever has to be pressed right up to the handlebar grip before the brake is full on then it should be adjusted at once. And I mean, *at once*. This is not a job you can afford to put off until the next day. When full on there should still be a space between the lever and the grip. With a spanner check all nuts for tightness once a week or as soon as you hear a squeak or rattle. To test the hub bearings lift each wheel in turn and see if it allows any side-to-side movement between the brake pads. If the movement is more than a trifle the cone, which hold the bearings in position, needs tightening very slightly, but the weight of the valve should still be enough to turn the wheel after adjustment.

In a similar manner test the bottom bracket (by taking hold of the cranks) and pedals for side shake and adjust if necessary but still leaving them free to revolve without binding.

The head bearings can be tested by gently lifting the handlebar. If you can move it up and down without the wheel leaving the ground the bearings are too slack. To adjust, first unscrew the hexagonal locknut, then turn the ring underneath it to the right, finally re-tightening the locknut. The bar should still turn easily after correct adjustment.

Do take care of your bike. Remember what I said at the beginning of this article. A sloppy bike probably means that a sloppy person is riding it. And it certainly means that that rider is asking for trouble—maybe big trouble.

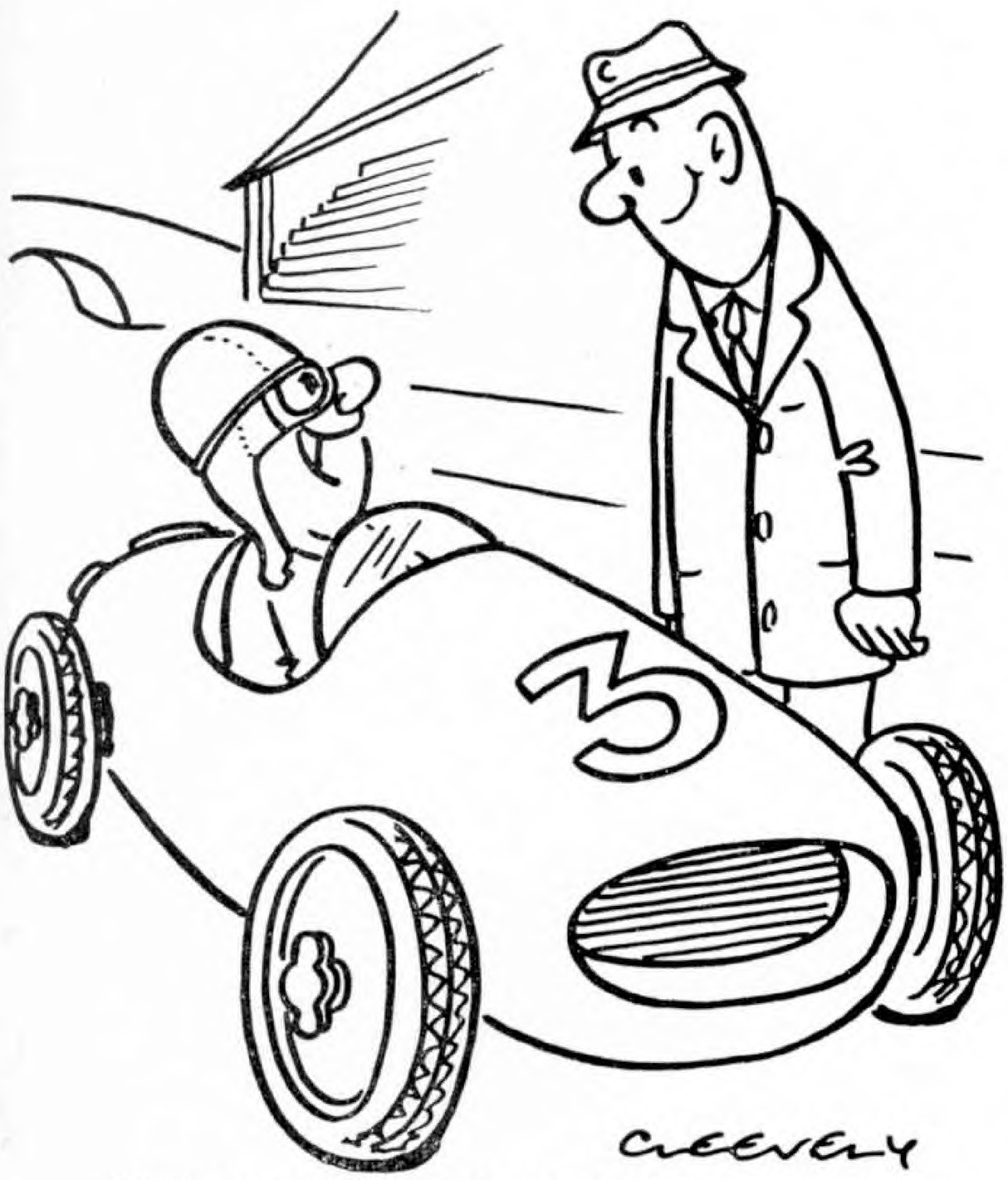
FIRESIDE FUN



The latest hire purchase plan has the ultimate in easy payment systems: 100 per cent deposit and no instalments.

* * *

Why does an elephant never forget?
Because nobody tells him anything.



It's very economical on tyres—the wheels hardly ever touch the ground.

Andy MacTavish was the name of the one-legged Scotsman who refused to pay more than half-price when it was standing-room-only at the pictures.

* * *

There was another Scotsman who went to the railway station and asked for a return ticket.

"Where to?" asked the booking clerk.

"Back here, of course", answered the Scotsman scornfully.

* * *

What goes ninety-nine bump?
A centipede with a wooden leg.

A white elephant had been rampaging and destroying crops for miles around. Nobody could catch him, so the destruction went on. The local chiefs then decided that as none of their local hunters could stop the elephant, they would call in expert advice from elsewhere.

A famous hunter from another part of Africa advised: "Buy a rock cake from a school canteen or tuck shop, and nail it to the ground. The white elephant will try to remove the bun, but it will not be able to eat it because the rock cake will be too hard. On the other hand, the elephant will not be able to move it because it is nailed to the ground. Eventually the white elephant will turn black with rage. . . . . And anyone can catch a black elephant."

* * *

Two butterflies went to a dance but were refused admission. It was a moth ball.

* * *

A family went to Paris and thought they would try some French food. They went into a restaurant and asked the waiter if he had frogs' legs.

"No," said the waiter, angrily. "I always walk like this".

* * *

An ornithologist was walking through the park when he met a lady who was wearing a very flamboyant hat in the shape of a bird.

"Excuse me, madam," the ornithologist said, "but would you please tell me what kind of bird that is on your hat"? The lady was speechless with surprise, but the bird said, "Shut up, you fool. I'm hitch-hiking".

* * *

What happened to the magician who swallowed a bottle of furniture polish?
He varnished.



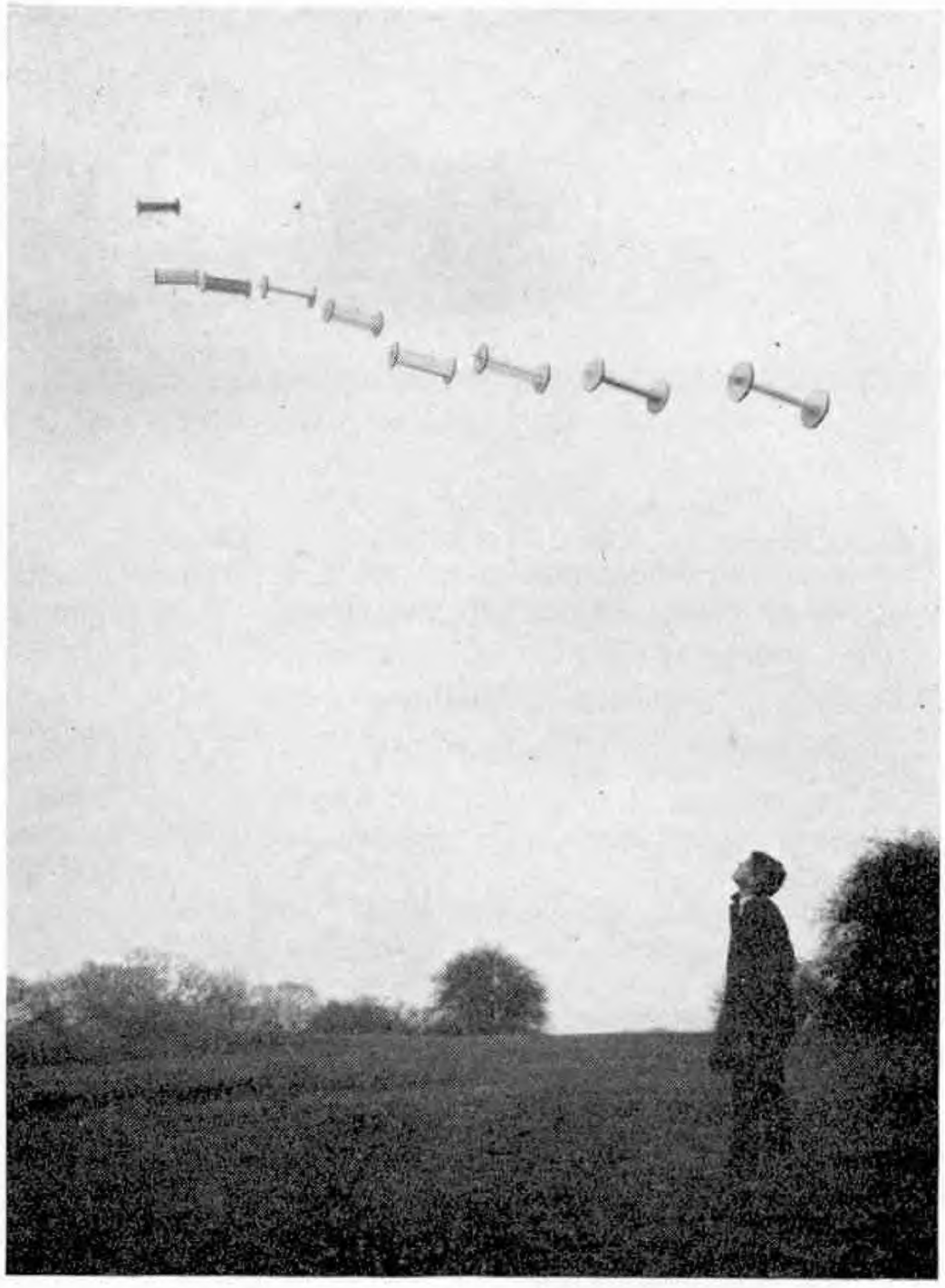
Here's a potion for witches who are with it. "Take two ounces of Uranium, three ounces of Plutonium . . . . . "



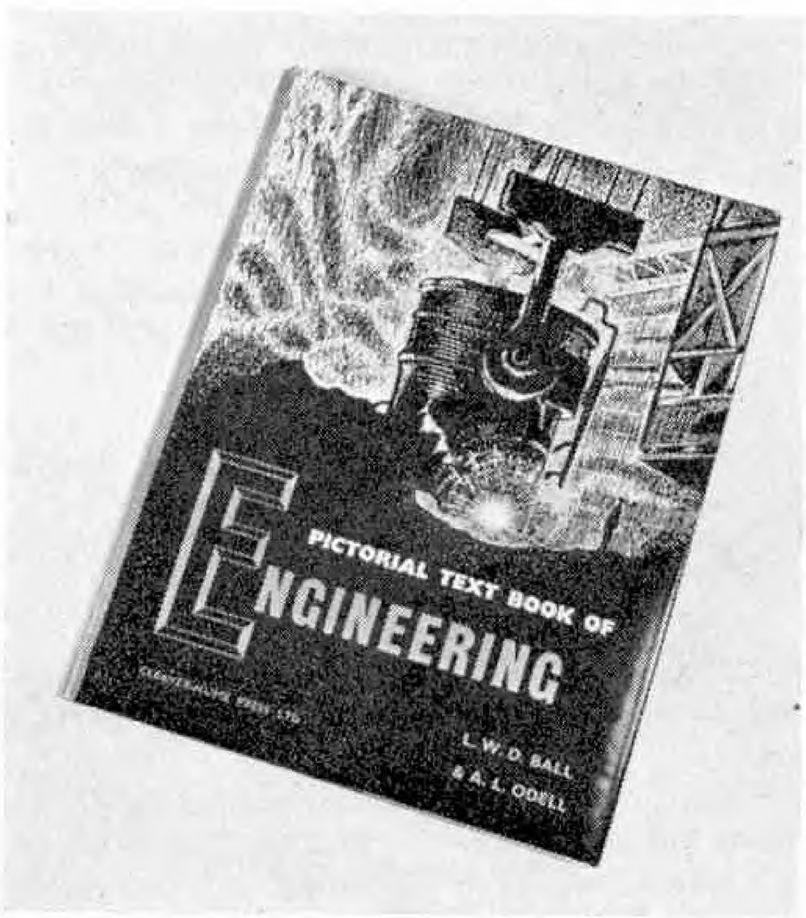
If you want to continue as our centre forward, you'll have to diet to get that centre of yours back!

window SHOPPING

kits and models on the market



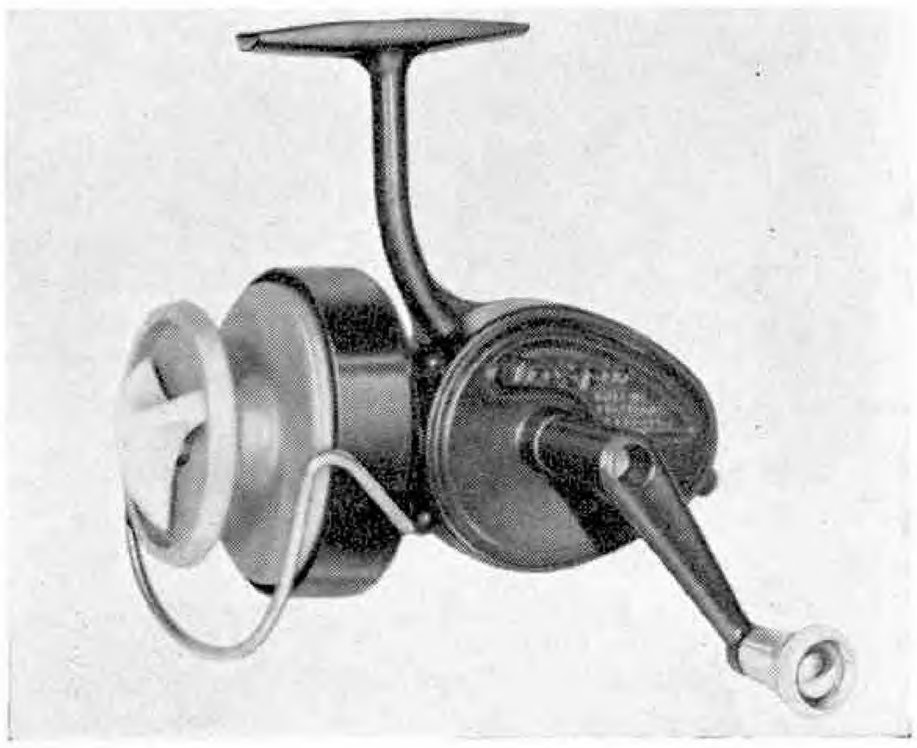
Kite fighting may develop as a popular sport in Britain with the advent this spring of a new spinning foam plastic Roto-Kite, specially designed for aerial combat. The Roto-Kite spins, dives, loops, hovers a few inches off the ground, and is capable of instant vertical take off in the slightest breeze. It is controlled by two strings attached to swivels on its ends, and the spool-shaped kite can be made to swoop down on an opponent's kite, or come up from underneath and knock it out of the sky. Patented and developed in Britain, the Roto-Kite is marketed by Lite Flite Plastics Ltd, Brent Way, Brentford, Middlesex. It costs **12s 6d.**



The *Pictorial textbook of Engineering* shows basic workshop processes by drawings and conveys a mass of detailed knowledge in the adjacent text. The book, by L. W. D. Ball and A. L. Odell, can be understood by beginners and will be useful to apprentices in practically any technical field. It deals with the basic technology of the subject, the principal bench and hand processes, tooling principles, and some general ideas of metallurgy. The book is published by Cleaver-Hume Press Ltd, and costs **£1 10s.**



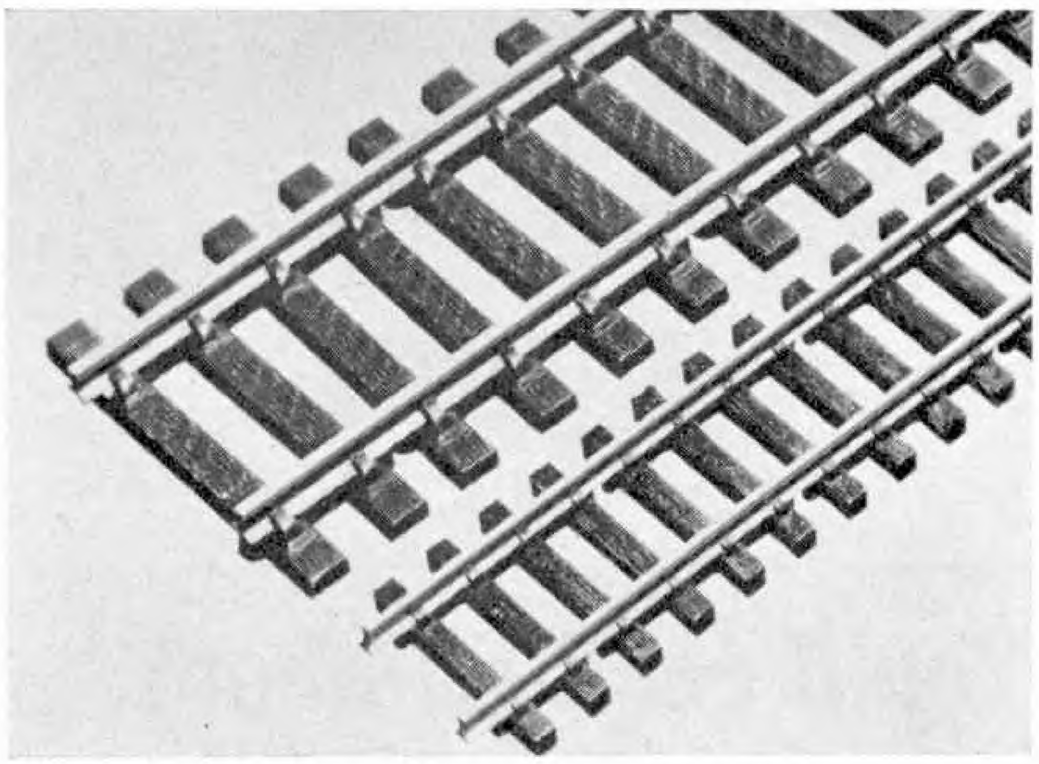
A Solido model from the French firm Solivac is the Ferrari 21.5. Extremely well detailed, including wire wheels and the well-balanced Solido suspension, the new Ferrari costs **9s.**



Modern anglers so appreciate the advantages of being able to cast a light bait a long way that the fixed spool or threadline type reel is universally accepted as standard equipment and the old fashioned centre pin reel is seen less and less. In the past price has limited the appeal of the fixed spool amongst young anglers, but now a low priced ambidextrous fixed spool reel is available and with its full bale stainless steel pick-up, optional anti-reverse, sensitive slipping clutch plus right or left hand wind it has all the features of more costly reels. The Truspin holds 100 yards of 10 lb nylon monofilament, and costs **12s 11d.**

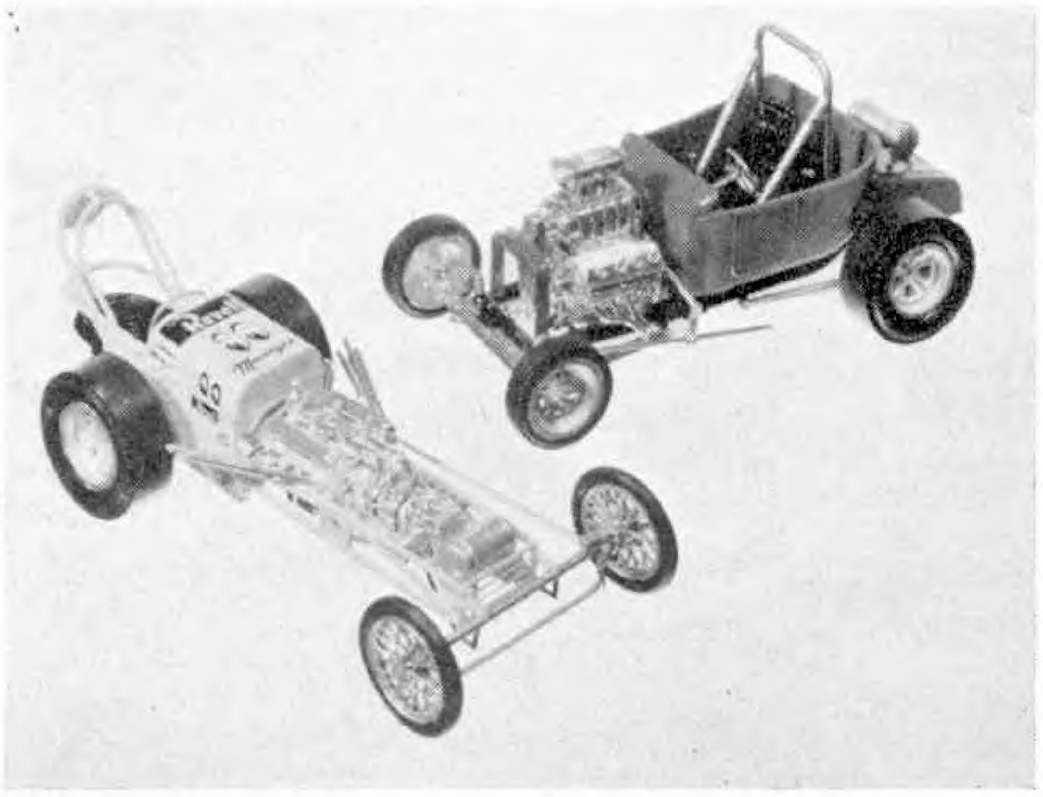


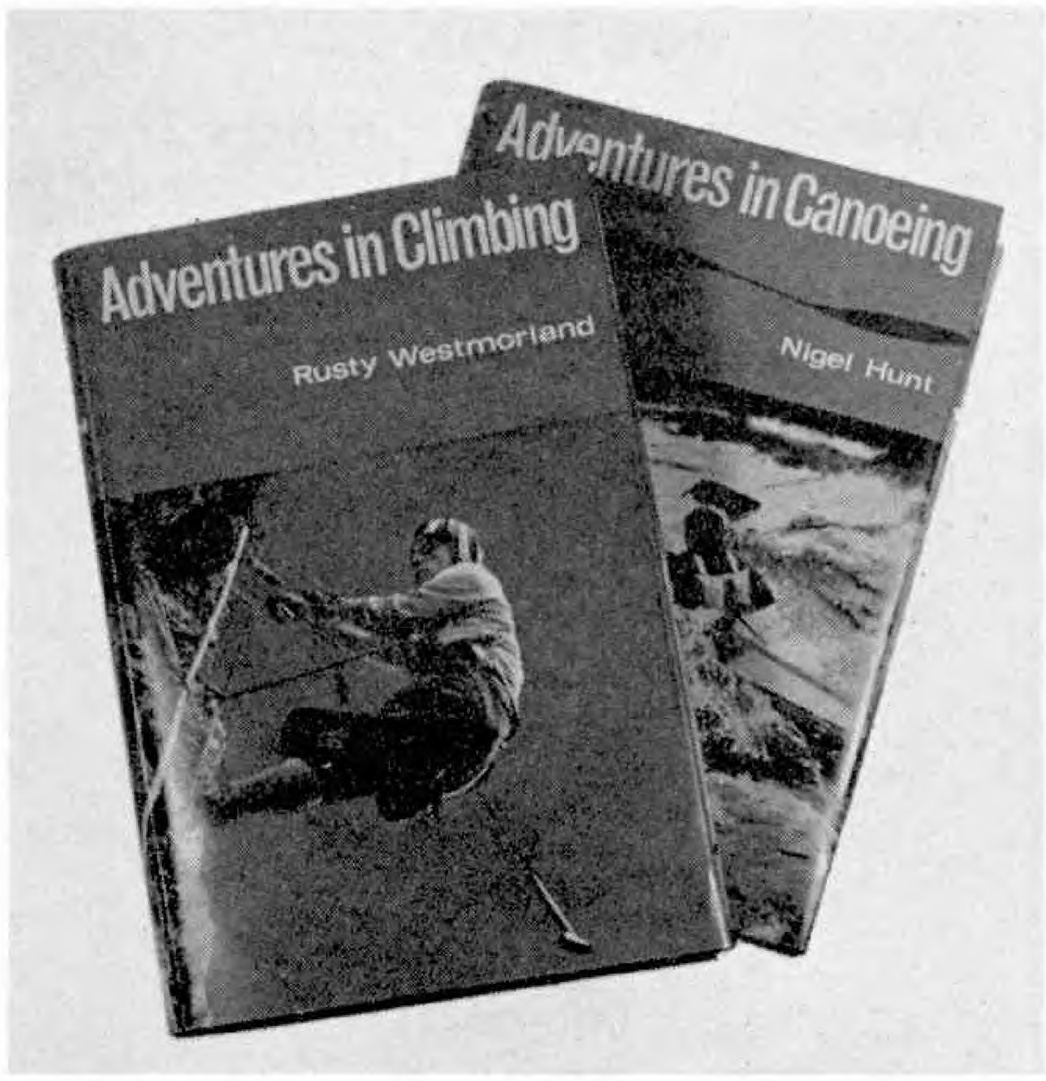
Paddy Hopkirk's 1964 Monte Carlo Rally victory is celebrated in model form by the appearance of his BMC Mini-Cooper "S" in the Corgi Toys range. Completely authentic, the Corgi 1964 Monte winner is finished in red with white roof and door panels and carries the number "37". Monte Carlo Rally plates are fitted front and rear, while a plated rotatable spot-light is attached to the roof. Other features are "Glidamatic spring suspension, seats, steering wheel and jewelled headlamp reflectors. Length of the model is $2\frac{7}{8}$ in (73 mm) and the price is **4s 6d.**



New track, to suit the increasingly popular OOO gauge is being produced by Peco. The illustration shows a piece of HO gauge track above the new track, which has all the detail of the larger size. It is flexible so that it can be curved to any radius, and is supplied in 3 ft lengths at **5s 6d.**

The car that reached 160 mph from a standing start in $\frac{1}{4}$ mile, the famous dragster, 'Mooneyes', has been brought out as a 1/25 scale kit by Revell. Mr. Sidney Allard who has been working to introduce dragster racing to this country was a technical adviser on this project. The Revell kit makes up two dragsters, and these can be modified considerably. Mooneyes was raced in this country in September 1963 by its maker, Dean Moon. The price of the kit is **£1 2s 6d.**





Canoeing adventures are the keynote of Nigel Hunt's book, but on the other hand, there is a wealth of practical advice. The beginner is guided in choosing the right canoe, through stages of learning to handle it, graduating to river touring, sea canoeing, wild water racing down rapids, and competitive slalom canoeing on white water. Safety precautions are also fully covered.

Rusty Westmorland's book has as its purpose to give information and advice on the techniques of climbing illustrated by incidents in the author's own life. This is a valuable book for any boy interested in climbing and in mountains. *Adventures in Canoeing* and *Adventures in Climbing* are both published by Pelham Books Ltd, at **15s** each.



New in the guided missiles and armoured vehicles range of plastic construction kits from Airfix is a model of the German Pz Kw VI Tiger 1 tank. This 56 ton tank was first used in Russia in 1942, and appeared in North Africa early the following year. Undoubtedly the most powerful tank of the period it had a reputation as an 'invincible monster'. The 65-part kit includes full armaments and German army insignia transfers. It is designed to the same scale as the Airfix HO and OO scale figures, railway rolling stock and Trackside series. The Tiger tank model kit costs **2s.**

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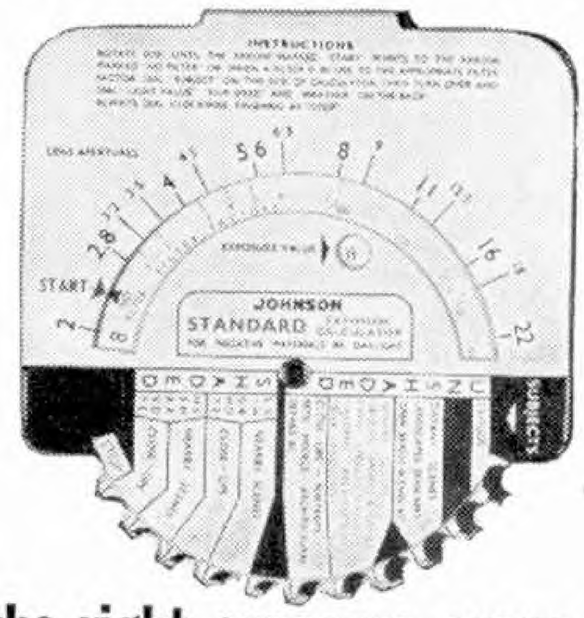
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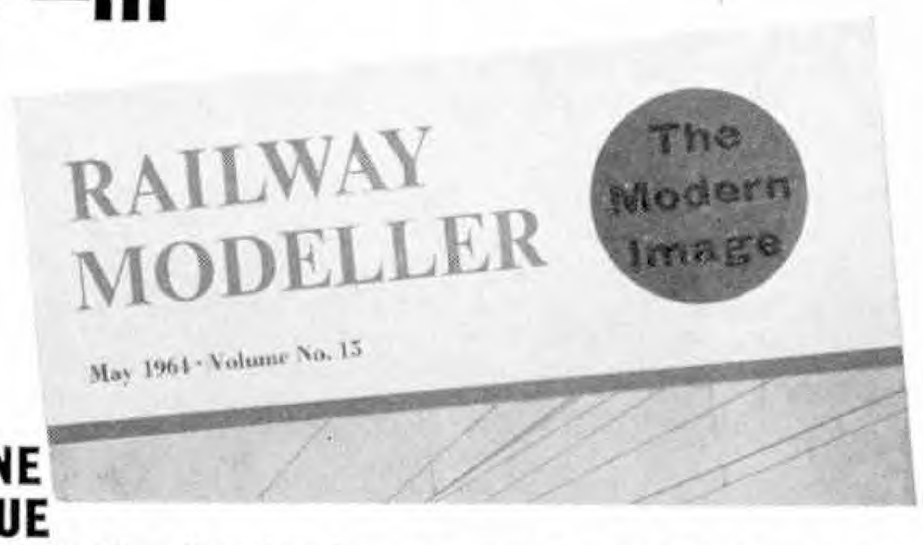
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THIS MONTH

meccano magazine

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by **Spanner**

A Meccano traction engine

ONE OF the most popular categories with Meccano model-builders is the road-vehicle group and one of the most interesting, as well as the most unusual, vehicles in that group is the traction engine. I set out below the building instructions for small and comparatively simple Meccano version of such a machine.

This model admirably illustrates the main features of the old-type vehicle which it represents. Power is supplied to the rear driving wheels and the crankshaft from a Meccano Emebo Motor by means of Driving Bands. A $5\frac{1}{2}$ in by $2\frac{1}{2}$ in Flanged Plate, to each side flange of which are bolted two $5\frac{1}{2}$ in Strips 1 and 2 spaced nine holes apart, forms the base of the body. Strip 2 is compound, being made up from a $3\frac{1}{2}$ in and a $2\frac{1}{2}$ in Strip. A $4\frac{1}{2}$ in by $2\frac{1}{2}$ in Flat Plate 3 and a further $5\frac{1}{2}$ in Strip 4 are bolted between the Strips 2, Strip 4 projecting two holes to the rear. The resulting angle is filled in by a $2\frac{1}{2}$ in by $1\frac{1}{2}$ in Triangular Flexible Plate 5. Both sides are joined by two $2\frac{1}{2}$ in by $\frac{1}{2}$ in Double Angle Strips and, these, in turn are joined by a $2\frac{1}{2}$ in by $2\frac{1}{2}$ in Flexible Plate 6.

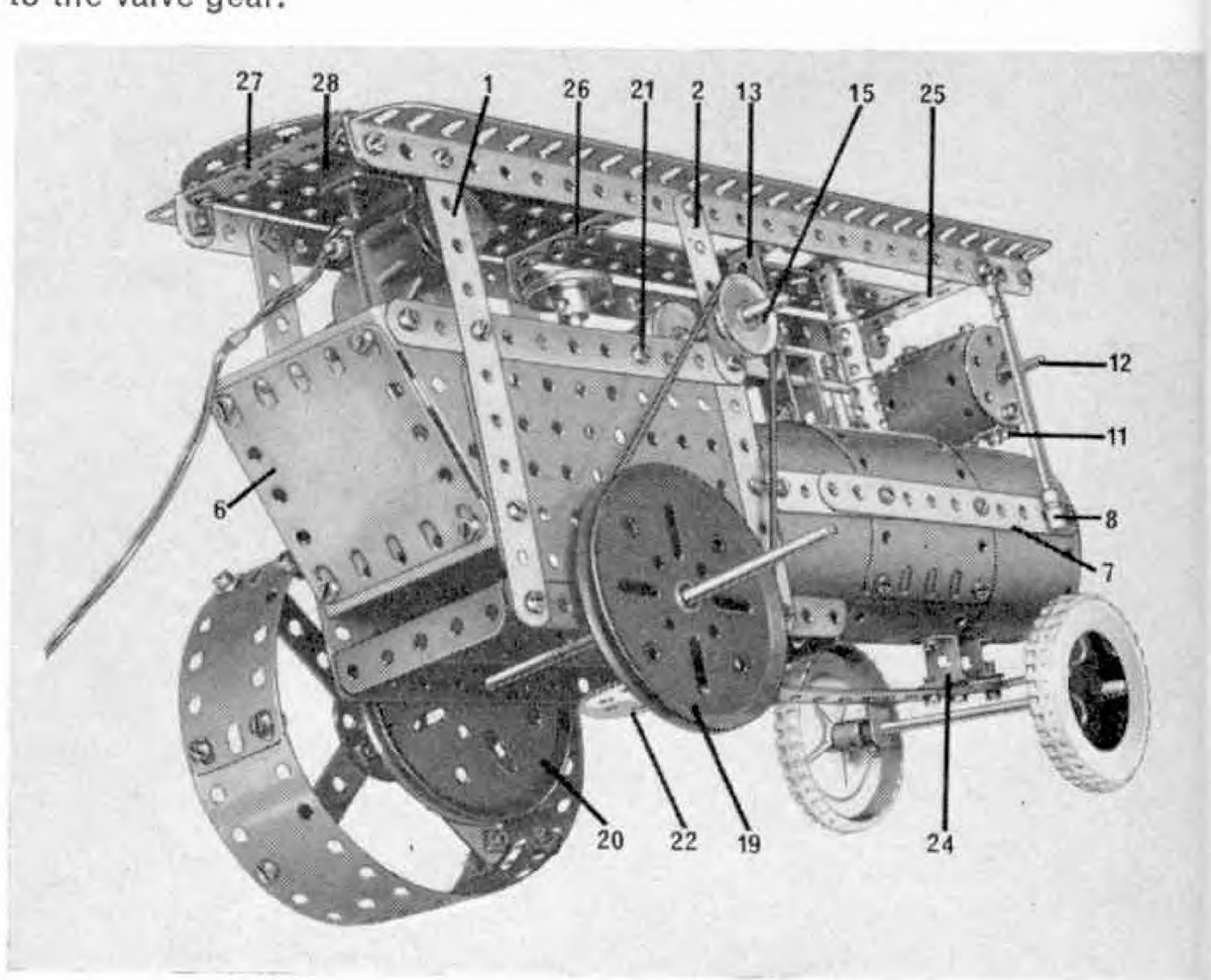
The boiler is built up, as shown, from three small cylinders made up of—working from the front—a $5\frac{1}{2}$ in by $2\frac{1}{2}$ in and a $4\frac{1}{2}$ in by $2\frac{1}{2}$ in Flexible Plate, two $5\frac{1}{2}$ in by $2\frac{1}{2}$ in Flexible Plates and, lastly, another $5\frac{1}{2}$ by $2\frac{1}{2}$ in and a $4\frac{1}{2}$ in by $2\frac{1}{2}$ in Flexible Plate. Strength is added by a compound $6\frac{1}{2}$ in strip 7, comprising a $5\frac{1}{2}$ in and a $2\frac{1}{2}$ in Strip, bolted along each side of the boiler. The foremost bolts holding this Strip also hold two right angle Rod and Strip Connectors 8 in position as well as a $2\frac{1}{2}$ in by $\frac{1}{2}$ in Double Angle Strip 9. Two Semi-Circular Plates 10 are bolted to Double Angle Strip 9.

Before bolting Plates 10 in position it is better to fit the generator which is composed of two $2\frac{1}{2}$ in by $1\frac{1}{2}$ in Red Plastic Plates, bent to form a cylinder, to which two-6-hole Wheel Discs are fixed by Angle Brackets 11. A 4 in Rod 12 carrying a 1 in fixed Pulley is journalled in the centre hole of these Wheel Discs and is held in place by Spring Clips. The generator is fixed to the boiler by a $\frac{3}{8}$ in Bolt, with a Nut and a Washer being used as spacers. An Angle Bracket to which a 1 in by $\frac{1}{2}$ in Double Bracket is bolted is fixed to the boiler to form the basis for the valve gear and to this, in turn, is bolted a $1\frac{1}{2}$ in by $\frac{1}{2}$ in Double Angle Strip 13 that later forms a support for the canopy. The piston is a 2 in Rod, carrying a $\frac{1}{2}$ in Pinion 14, and the connecting rod is a compound $2\frac{1}{2}$ in strip, built from two $1\frac{1}{2}$ in Strips which is pivotally connected to the Pinion 14 by a bolt in one of its transverse tapped bores.

The crankshaft is constructed from two 2 in Rods, each passing through one or the other of the compound strips 2. The right-hand side Rod carries two 1 in fixed Pulleys 15 and 16 while the left-side Rod carries a 2 in and a 1 in fixed Pulley 17 and 18. An Angle Bracket is tightly fixed to the bosses of Pulleys 16 and 18 by a nut, on a bolt, clamping the Angle Bracket to the boss. The Pulleys are turned until the Angle Brackets are in line and then fixed in that position. Finally, the compound strip forming the connecting rod is lock-nutted to the Angle Brackets by a $\frac{3}{8}$ in Bolt.

Two $3\frac{1}{2}$ in Rods, joined by a Rod and Strip Connector, form the rear axle which is journalled in the flanges of the $5\frac{1}{2}$ in by $2\frac{1}{2}$ in Flanged Plate, two 3 in Pulleys 19 and 20 securing it. Each rear road wheel is made up from one $2\frac{1}{2}$ in by $1\frac{1}{2}$ in and two $5\frac{1}{2}$ in by $1\frac{1}{2}$ in Flexible Plates. Spokes are provided by one $4\frac{1}{2}$ in and two $2\frac{1}{2}$ in Strips

Another view of the model showing the drive from the rear axle to the valve gear.



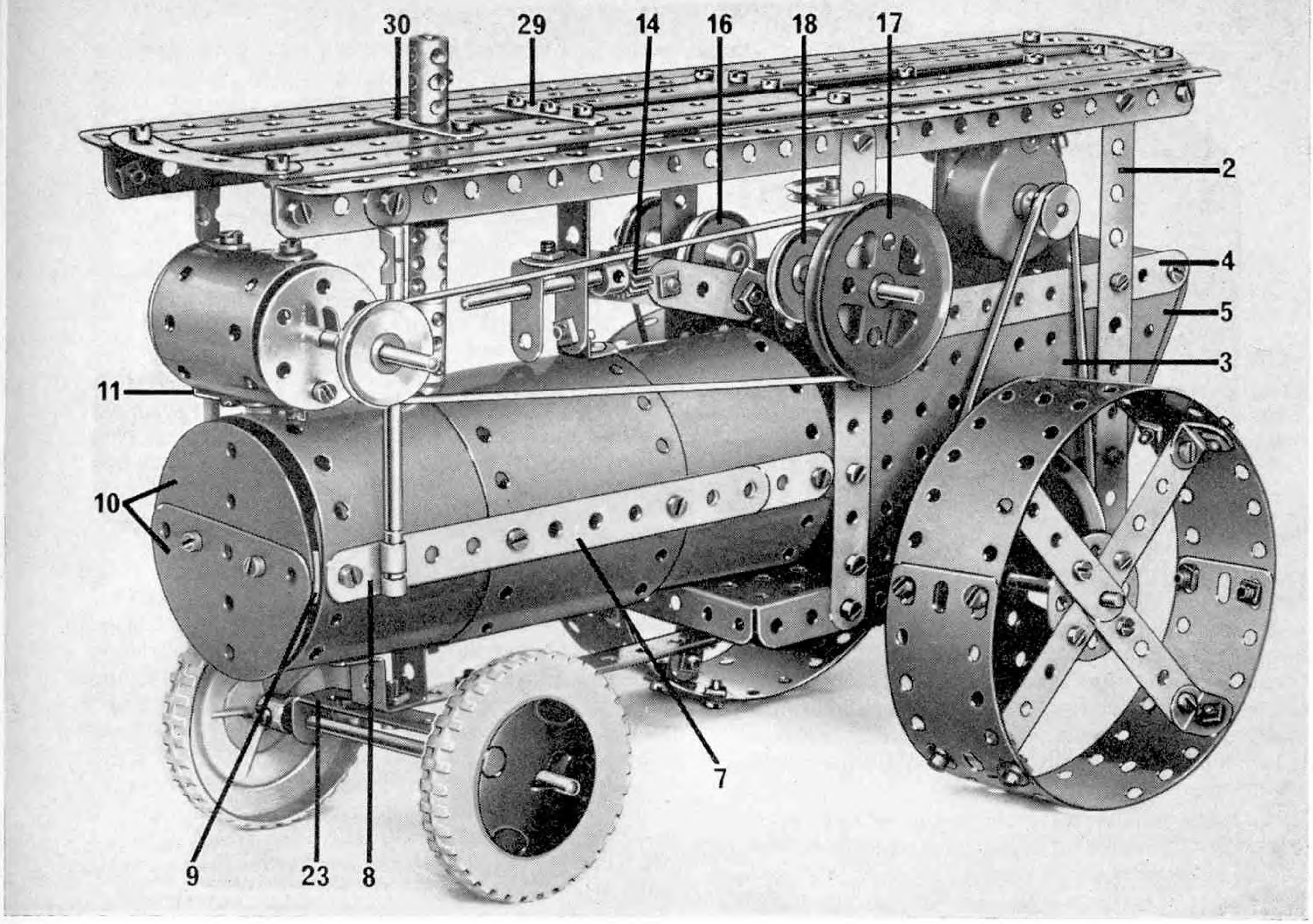
Results of our latest Model-building contest

Section A (Competitors under 14 on January 31, 1964): First prize, Cheque for £5 5s: Ian Sanders. Chester; Second prize, Cheque for £3 3s: Nigel Tuersley, South Wanston, Nr. Winchester; Third prize, Cheque for £2 2s: Andrew Day, Whitchurch, Cardiff.

Ten Prizes of 10s 6d:—Hatim Kaderbhai, Mombasa, Kenya; John Radford, Upminster; Leslie Thompson, Uitenhage, Cape Province, S. Africa; Simon Herrick, Wotton-U-Edge; Ian Clover, Stowmarket; Donald Stewart, Elgin; Larry McEwan, Deep River, Ontario, Canada; Andrew J. Hill, Watford; Ian Reid, Gloucester; Aidan O'Hogan, Monkstown, Co. Dublin.

Section B (Competitors aged 14 or over on January 31, 1964):—First prize, Cheque for £7 7s: Michael Brookfield, Newcastle, Staffs.; Second prize, Cheque for £5 5s: Dr. G. Gingras, Montreal, Canada; Third prize, Cheque for £3 3s: Brian W. Rowe, Newton Abbot.

Ten Prizes of £1 1s.: G. Servetti, Piacenza, Italy; E. G. Frost, Birdingbury, Nr. Rugby; H. Smith, Port Elizabeth, S. Africa; Michael Penrice, Huddersfield; F. Pattison, Street, Somerset; H. J. Van Wijngaarden, Amsterdam Zuid, Holland; Brian Calvert Lurgan, Co. Armagh; A. R. Gough, Hamilton, New Zealand; H. W. Henry, Strood; T. J. Taylor, Manchester.



bolted to an 8-hole Bush Wheel at the centre and connected to the Plates by Angle Brackets. The Bush Wheel is fixed on the Rod forming the axle and a Driving Band is run between Pulleys 19 and 15.

Journalled in a 1 in by 1 in Angle Bracket, held by Bolt 21 and the Flanged Plate is the steering column which is a 5 in Rod held in place by a Spring Clip above the Angle Bracket. The steering wheel is a 1 in Pulley with boss. A 57-teeth Gear Wheel 22 is fixed to the bottom end of the steering column and a compound 7 in strip, built from two $5\frac{1}{2}$ in Strips, is lock-nutted to this by a $\frac{3}{8}$ in Bolt. At its other end, the 7 in strip is lock-nutted by another $\frac{3}{8}$ in Bolt to a $2\frac{1}{2}$ in by $\frac{1}{2}$ in Double Angle Strip 23, through its second hole. This Double Angle Strip is, in turn, lock-nutted to a Double Bent Strip 24, bolted to the boiler. A 5 in Rod forming the front axle is mounted in the lugs of Double Angle Strip 23 and is held by Spring Clips. The off-side front wheel is tightly fixed to the axle but the near-side is free on the axle, being held by a Spring Clip (see illustrations).

Next, the canopy is built from two $12\frac{1}{2}$ in Angle Girders connected by $2\frac{1}{2}$ in by $\frac{1}{2}$ in Double Angle Strips 25, 26 and 27. These Double Angle Strips are joined by four $12\frac{1}{2}$ in Strips, as shown, so that there is a space the width of one Strip in the centre. Between Double Angle Strips 26 and 27 this space is filled in by a $5\frac{1}{2}$ in Strip 28 to the underside of which an Emebo Motor is attached by two $\frac{1}{2}$ in Bolts. Two $1\frac{1}{2}$ in Strips 29 and 30 are bolted across the remaining space in the canopy which is then connected to the traction engine proper by two $3\frac{1}{2}$ in Rods at the front, by Strip 2 in the centre and by Strip 1 at the rear. A $2\frac{1}{2}$ in Stepped Curved Strip is bolted at each end of the canopy.

The chimney is a 4 in Rod, on which are four Couplings, which passes through Strip 30 and into the boiler. It is held in place by the two Couplings which are clamped each side of Strip 30.

Finally, a Driving Band connects the $\frac{1}{2}$ in Pulley on the Motor to 3 in Pulley 20.

Parts required.—4 of No. 1; 9 of No. 2; 2 of No. 3; 12 of No. 5; 4 of No. 6a; 2 of No. 8; 2 of No. 10; 1 of No. 11a; 13 of No. 12; 1 of No. 12a; 2 of No. 15; 2 of No. 15b; 4 of No. 16; 3 of No. 17; 2 of No. 19B; 1 of No. 20a; 5 of No. 22; 2 of No. 24; 2 of No. 24b; 1 of No. 26; 1 of No. 27a; 7 of No. 25; 120 of No. 37a; 109 of No. 37b; 19 of No. 38; 1 of No. 40; 1 of No. 45; 1 of No. 46; 8 of No. 48a; 1 of No. 52; 2 of No. 53a; 4 of No. 63; 2 of No. 90a; 3 of No. 111a; 5 of No. 111c; 1 of No. 186b; 1 of No. 186c; 2 of No. 187; 4 of No. 188; 4 of No. 189; 1 of No. 190; 2 of No. 191; 4 of No. 192; 2 of No. 194; 2 of No. 212; 2 of No. 212a; 1 of No. 213; 2 of No. 214; 2 of No. 221; 1 Emebo Motor.

by **Spanner**

A powered sifting machine

SINCE ITS invention Meccano has proved itself a highly versatile product but this adaptability has been greatly increased by the introduction of the Elektrikit. In our picture below you see a model—an Automatic Sifting Machine—which demonstrates the much-enlarged scope of the system. It represents an apparatus used for sifting or grading gravel, etc., and it makes use of standard Meccano Parts, in conjunction with various Elektrikit Parts. The standard Parts used are not taken from any particular Outfit. I should tell you that the operating machinery is rather delicate and will almost certainly require some very careful adjustment. When the current is switched on, the actual sifter will probably need to be started manually by pushing it backwards and forwards a few times so as to help the oscillating movement.

To build the model it is best to commence with the Framework. For this a rectangular frame, consisting of two $12\frac{1}{2}$ in Angle Girders 1 and 2, connected together by two pairs of $5\frac{1}{2}$ in Strips 3 and 4 is built up. Two $12\frac{1}{2}$ in Strips 5, only one of which can be seen in the illustration, and two $12\frac{1}{2}$ in Braced Girders are bolted in place as shown. Four Double Angle Strips 6 link the sides of the frame together. Two $3\frac{1}{2}$ in Strips 7 are attached to the Angle Girders 1 by Angle Brackets and Elektrikit Cylindrical Coils are bolted to them, one Coil being spaced away from the Strip by three Washers. A Double Bracket 8, spaced away by two Washers, is bolted to a $2\frac{1}{2}$ in by 1 in Double Angle Strip attached to the $12\frac{1}{2}$ in Strips 5, and the Strips 3 are then extended by $5\frac{1}{2}$ in Strips 9. Two $7\frac{1}{2}$ in Strips 10 supported by $2\frac{1}{2}$ in Strips connected to a $2\frac{1}{2}$ in by $\frac{1}{2}$ in Double Angle Strip bolted to the ends of Strips 9, are secured through the fourth hole of Strips 9, as shown.

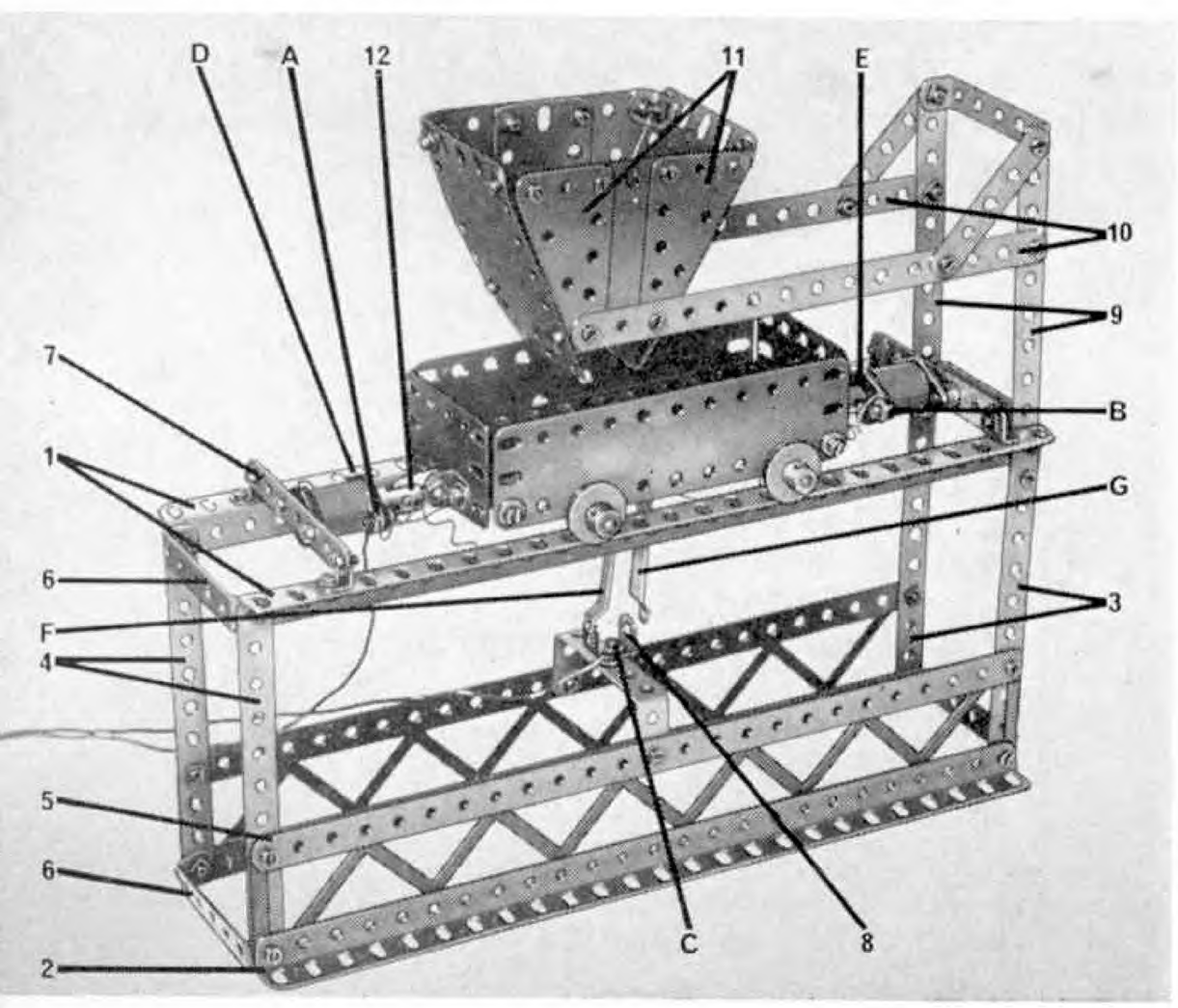
Attached to each Strip 10 are two $2\frac{1}{2}$ in by $1\frac{1}{2}$ in Triangular Flexible Plates 11 and a $2\frac{1}{2}$ in by $1\frac{1}{2}$ in Flexible Plate, all forming the sides of a hopper into which the material to be sifted is fed. These two sides are connected together by $3\frac{1}{2}$ in by $2\frac{1}{2}$ in Flexible Plates and Angle Brackets, thus completing the hopper.

The sifter

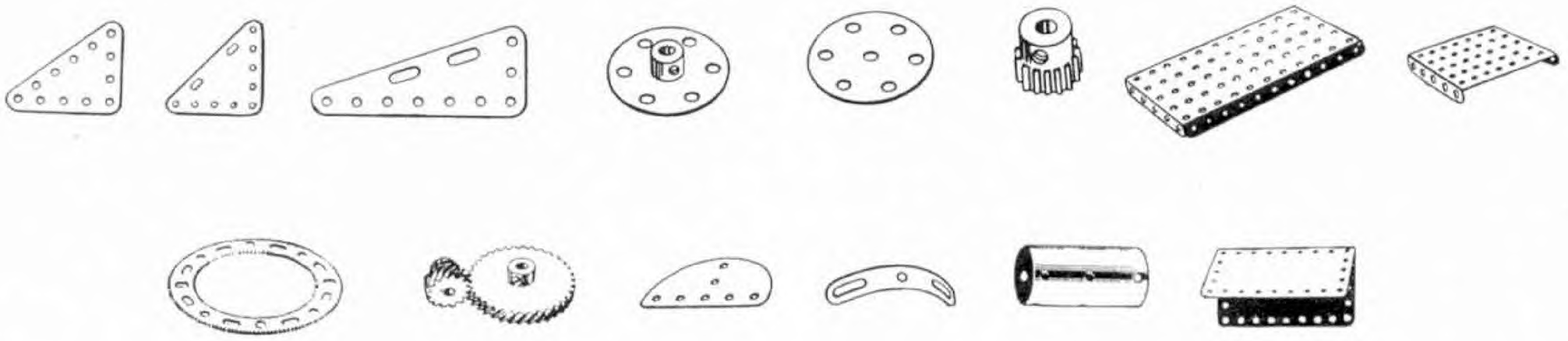
Now, only the sifter itself remains to be built. Two $5\frac{1}{2}$ in by $1\frac{1}{2}$ in and two $2\frac{1}{2}$ in by $1\frac{1}{2}$ in Flexible Plates are bolted to the flanges of a $5\frac{1}{2}$ in by $2\frac{1}{2}$ in Flanged Plate. The bolts holding the $2\frac{1}{2}$ in by $1\frac{1}{2}$ in Plates in position at each end also hold two Angle Brackets in place, and between these is fitted a Fishplate to which is bolted a Slotted Core for Cylindrical Coil 12. Four $\frac{3}{4}$ in Flanged Wheels are mounted on $4\frac{1}{2}$ in Rods with Spring Clips holding the Flanged Plate central on the Rods. Attached to two Double Brackets underneath the Plate is a $5\frac{1}{2}$ in Insulating Strip. Two 2 in radius Bent Wiper Arms are bolted to two Angle Brackets attached to the Insulating Strip, one hole apart.

Special care should be taken with the electrical connections. One wire from the supply battery should be taken to Bolt A of one Coil and another wire from A to Bolt B of the other Coil. The other wire from the battery is taken to Bolt C. Now, connect a wire from Bolt D on the Coil indicated to the Angle Bracket fixing Wiper Arm F. A further wire is taken from Bolt E on the other Coil to the Angle Bracket fixing Wiper Arm G. Each Wiper Arm is arranged on the *outside* of the lugs of the Double Angle Bracket 8. When the Battery is connected with one of the Wiper Arms in contact with the Double Bracket 8 the Coil to which it is connected pulls the Sifter towards it. This action breaks the contact, and simultaneously the other Wiper Arm makes contact and the Sifter is pulled back again. By careful adjustment the Sifter can be made to move rapidly to and fro.

This powered sifter, which moves rapidly backwards and forwards, can be constructed from Elektrikit and standard Meccano Parts.



Parts required.—Standard parts.—2 of No. 1; 2 of No. 1b; 6 of No. 2; 2 of No. 3; 2 of No. 5; 4 of No. 8; 2 of No. 10; 3 of No. 11; 18 of No. 12; 2 of No. 15a; 4 of No. 20b; 4 of No. 35; 74 of No. 37a; 68 of No. 37b; 30 of No. 38; 1 of No. 46; 5 of No. 48a; 1 of No. 52; 2 of No. 99; 2 of No. 111a; 9 of No. 111c; 4 of No. 188; 2 of No. 189; 2 of No. 190a; 4 of No. 221. Elektrikit Parts.—1 of No. 501; 2 of No. 522; 2 of No. 527; 2 of No. 533; 1 of No. 558.



Dealers who specialise in Meccano spare parts

Listed below are some of the dealers who sell Meccano accessories and spare parts. This is intended to aid enthusiasts—and there are many of them—who constantly require additional spare parts for their Sets. All dealers can, of course, order Meccano spare parts for their customers, but those listed here are among our spare part specialists.

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JACKSON CYCLES LTD.
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Build yourself

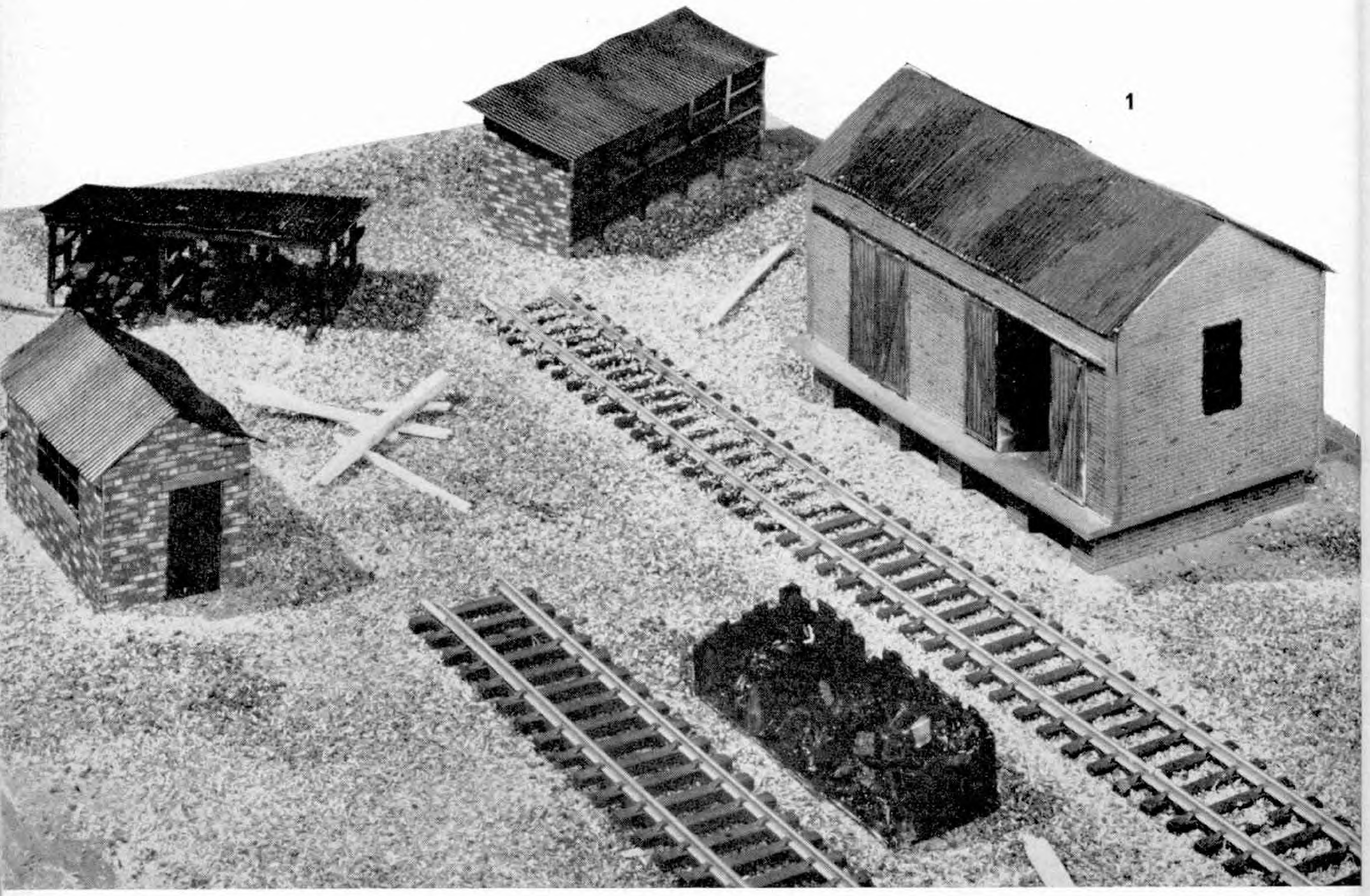
by **Linesman**

A NATURAL progression of the types of scenery I have mentioned in previous months is the description of a feature that is capable of filling a corner on your baseboard—usually one of the most difficult parts of the layout to fill satisfactorily. A useful feature is the merchant's coal yard, which can not only be made to look effective, but can also serve a useful purpose by providing additional shunting movements for those who enjoy the operating side of model railways.

The buildings to be seen in a coal yard are usually few in number and are sometimes dilapidated. They vary in design from town to town, so that any reader may use the models shown in the photographs as a basis for his goods yard, making variations of his own.

Most important of the items I used to construct the buildings shown in our top picture is that which forms the substructure of nearly every building in the photograph. This is known as styrene sheet, and is sold under such trade names as Plastikard and Synthicard. This material is easier than cardboard, or plywood, to work with, and I can fully recommend it. An example of the ease with which various shapes can be formed is demonstrated by scoring a groove in the material, and then bending it over the crack. The card will then break to the shape already scored. The material is 'glued' by brushing on Synthi-Goo or Meg Pack, liquids which are in fact, solvents, the result being that the card is melted and merged. The solvent can usually be obtained from the same shop as the styrene sheet. This means that joints may be filled, sandpapered and worked in ways that would be impossible with cardboard.

The lower illustration on this page shows the large store shed, which has a small window in one end, and a representation of double sliding doors, one pair open and one shut, along one side. The two other walls are blank. First cut the two blank sides from styrene sheet (·04 is suitable) making the larger wall 4½ in to 5 in long and 2½ in high and the end wall 3 in long and 3½ in high to

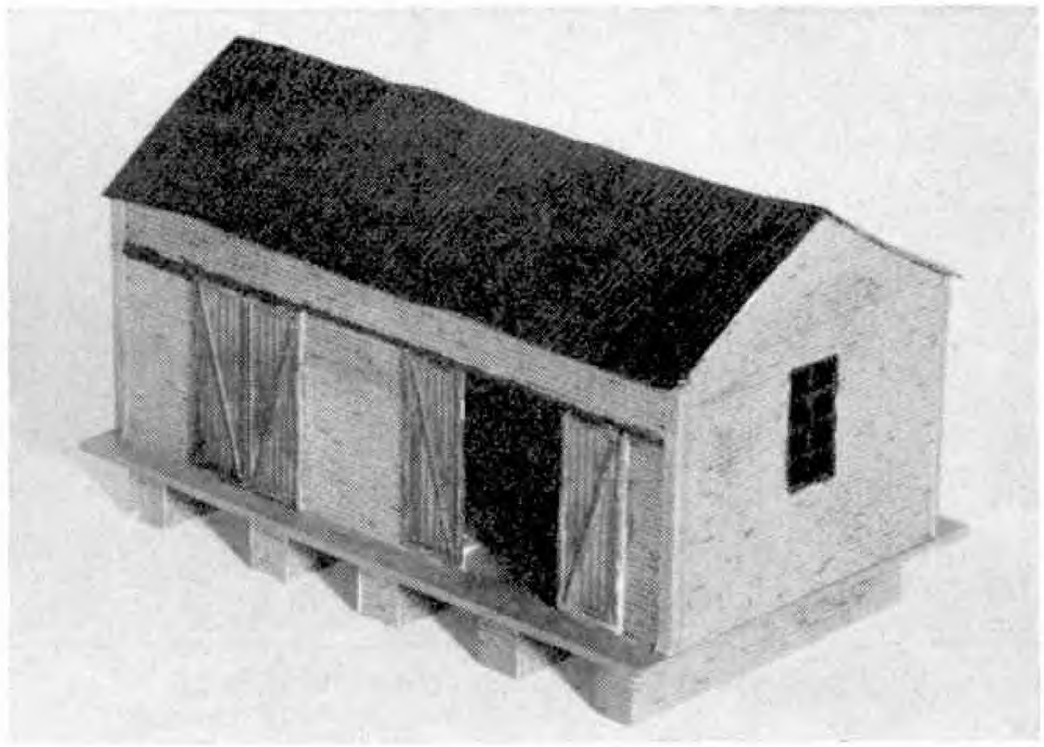


1

1 General view of the coal yard, showing the five structures involved. That on the extreme right is the storage shed, the coal staithes are in the foreground, the office is on the left of the picture, the woodshed is in the left background, and the lean-to is seen centre background.

2 A close-up of the storage shed, showing the discoloration of the corrugated iron roof. This is done by mixing rust red paint with black.

3 This view of the wood shed shows its extremely simple construction from balsa wood. Corrugated sheet and styrene sheet are used for the false roof. The wood is coloured with a brown paint mottled occasionally with greys and blacks.



2

a realistic model local coal yard

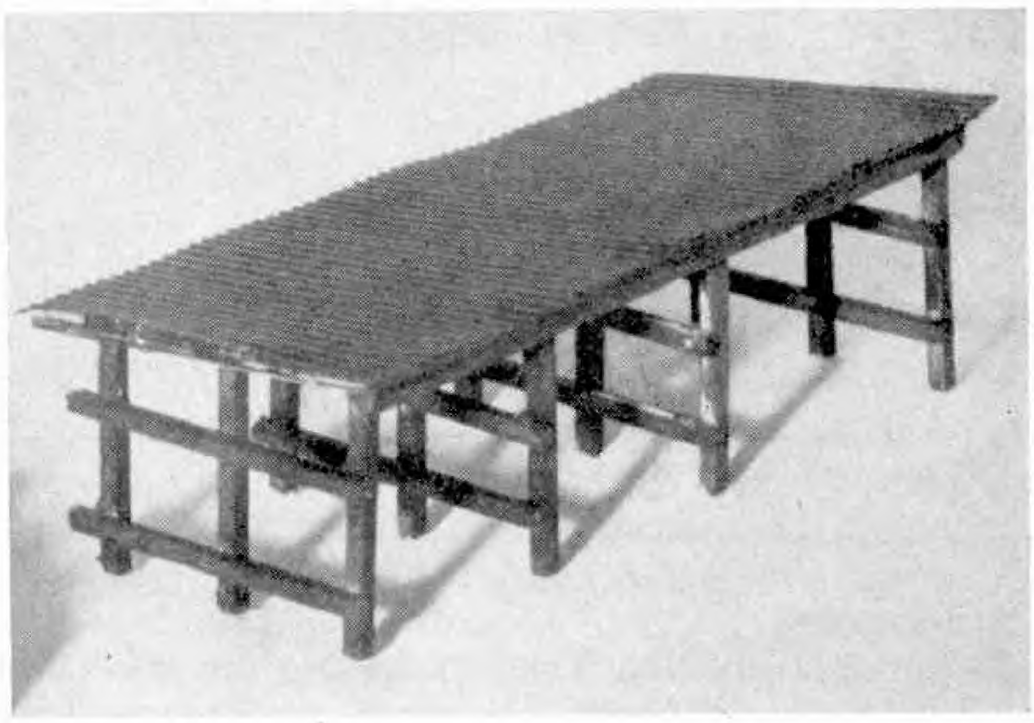
the apex of the roof. Adopt suitable proportions for the doorways, etc. and remove the spaces for doors and windows with a knife. The doors are cut from styrene, although of a thinner quality than that used for the building itself. The planking for the doors is then scribed with a blunt knife, and the framing, also of styrene, is glued round the door. When this has dried, the diagonal pieces are glued in the centre of the door, and the slide rail is glued above all four doors in one continuous piece. When this completed side has dried it may be glued to the blank end and the other side, and then left to dry.

Window Frame

The end containing the window is then placed on the work bench and the window frame pieces assembled from styrene sheet cut into strips approximately 1 mm wide. Use a sharp model knife and a steel rule for this operation. This side may then be joined to the three already glued together. The four walls of the main building are then left to dry, and the two pieces of the roof may then be cut from styrene sheet and glued on top. The base may also be cut out of the thickest card available, and glued underneath the building to give it support. When the main building has dried, the five brick piers can be constructed from a frame made of four pieces of ·03 styrene sheet glued, assembled, and fixed to the underside of the floor base. The whole building is then covered with brick paper, three types of which currently available on the market are manufactured by Hamblings, Modelcraft and Superquick.

The Office

The smaller building, or office, is built in the same way as the storage shed, and when completely dry, brickpaper is glued over the walls. The roofs of the building are intended to represent corrugated iron, and the material used is made by Messrs. G. N. Slater of 6 Dalveen Drive, Timperley, Cheshire. It is obtainable either direct from them or from most good model shops. The woodshed and lean-to are made from balsa wood



3

strip, and these too, are covered with brickpaper when necessary, and roofed with 'corrugated iron'.

The coal staithes are very simple in construction, and consist simply of six pieces of medium-thick styrene sheet—a base, ($2\frac{1}{2}$ in long by 1 in) a back, ($2\frac{1}{2}$ in by $\frac{5}{8}$ in) and four uprights (1 in by $\frac{5}{8}$ in). The back and the upright pieces are scribed at $\frac{1}{8}$ in intervals to represent planks, and their upper edges are cut to different heights to give the appearance of unevenness. Very small lumps of coal are glued into heaps in the spaces between the uprights and the whole structure is painted a matt black.

Bits and pieces

The ground is made simply by covering the area around the buildings with Casco glue. Sawdust, dyed in different shades, is sprinkled on. The whole area is then scattered with an assortment of rubbish such as old locomotive wheels, bits of timber, etc.

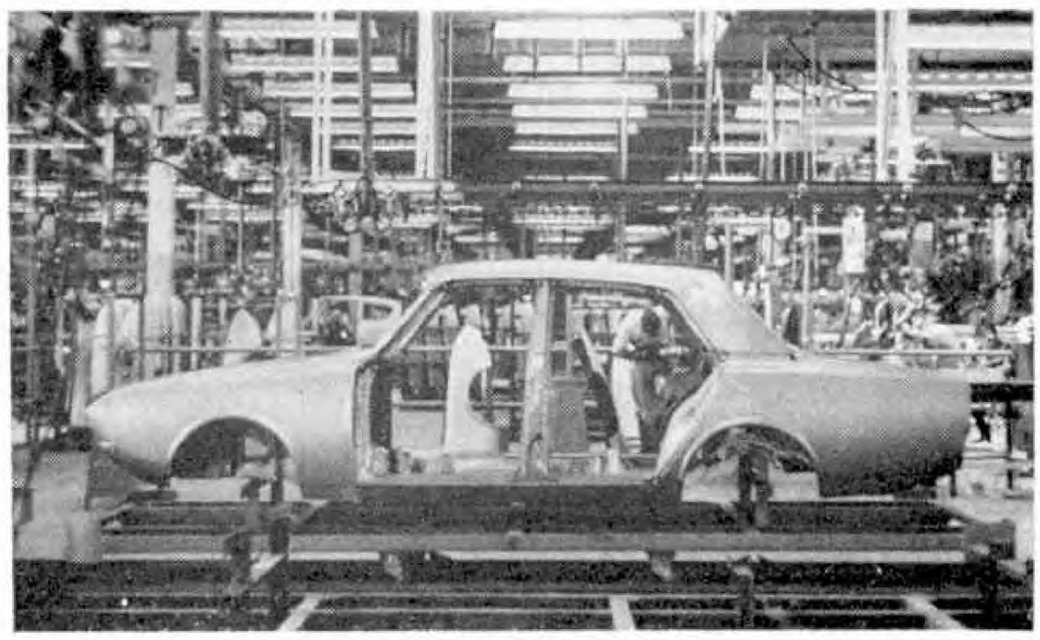
Hornby-Dublo No. 4635 Coal Wagons can be used in the yard. Bogie Bolster Wagon No. 4610 and the Low-Sided Wagon No. 4649 can also put in an occasional appearance for the transportation of the wood and other materials usually found in a coal yard.

Dinky Toy news
by **Chris Jelley**

SWASHBUCKLERS . . . and



Close-up of the new Ford Consul Corsair (Dinky Toys No. 130).



A view of an actual Corsair at one stage of its production at Ford's Halewood factory.

THE CORSAIR and the Routemaster are the two latest models to join the Dinky Toy range. And how well the Ford Consul Corsair lives up to its flamboyant name! It's a dashing model, too, this new Dinky (list No. 130), with features that include Prestomatic steering, four-wheel suspension, sliding door windows, interior fittings and jewelled headlamps. An opening bonnet gives access to a well-detailed replica of the engine.

Also fitted is a strong die-cast base which shows considerable chassis detail ranging from exhaust pipe and silencer to differential casing.

When referring to the actual car, it is not strictly correct to speak in the singular. As Fords themselves say, 'The Corsair is, in fact, a whole range of cars—and there are no less than ten versions . . . The Corsair is, therefore, available in standard and de-luxe form with floor or column gear-shift, bucket or bench seats and single or two-tone colours. It is also the only British medium car to offer both two- and four-door variations'. (The Dinky model is based on the two-door version.)

Same power plant

But minor differences aside, the Ford range can be split into three basic types, namely standard, de-luxe and Gran Turismo.

Both the standard and the de-luxe versions have an identical power plant—a four-cylinder ohv engine of 1,498 cc capacity which gives a gross power-output of 64 bhp at 4,600 rpm. The GT model has a slightly modified version of the same engine inasmuch as it has a higher compression ratio, resulting in the much-increased gross power-output of 83·5 bhp at 5,200 rpm. In addition, it has a special camshaft, a twin-choke carburettor and a four-branch exhaust manifold.

New factory

Externally, all three types are similar, each having the excitingly different and highly distinctive Corsair shape. Inside also they are pretty much the same, the main differences being optional front bucket seats and floor gear-change lever in the de-luxe version, while the standard has a front bench seat and column gear-change lever. The GT has bucket seats and floor change as standard fittings, together with a rev. counter, an ammeter and an oil-pressure gauge additional to the usual instruments found in the two other models or, indeed, in almost any car of today.

Ford produce the Corsair in their new factory at Halewood, on the outskirts of Liverpool and, although they are already making more than 1,000 cars every week—of which roughly half are Corsairs—building on the 346-acre site is still in progress. At the time of writing the Stamping and Assembly Plant there employs 8,000 of an

busmen



An actual Routemaster bus pictured on its journey through the heart of London.



The Dinky London Transport Routemaster (No. 289).

ultimate labour force of 9,000 people, but this is by no means the end. A new Transmission Plant is now nearing completion and will be in operation before the end of the year, resulting in a further 2,500 jobs. This, according to Fords, makes it the biggest plant in the world.

Returning to the miniature, I have already told you of most of the features it incorporates, but there is one other item which will interest collectors—a bonnet lifter. This consists of a small button which protrudes slightly from the front underside. When pressed the button lifts the bonnet so that it can be opened quite easily. The Dinky Corsair is finished in all-over flamboyant red with cream seats.

Routemaster

But if the Corsair is destined to be a smash-hit in the model charts, so also must be the other new release—a London Transport Routemaster Bus, numbered 289 in the Dinky list. I have always been fascinated by miniature die-cast models of double-deck buses, and this example has revived all the old interest created for many collectors by the successful Dinky Toys Atlantean Bus.

The Routemaster really is a marvellous job, designed to the same scale as the Atlantean. The basic casting itself is particularly well-detailed, yet greater realism has been added by the inclusion of windows and seats, a driver in the cab, and a 'clippie' standing on the platform. For the first time, full route information is given on the destination indicators and the route shown is an actual run by London Transport—the 221 to King's Cross via Wood Green and Finsbury Park.

Standard vehicle

The prototype on which our model is based is that which is seen in London in largest numbers. When we decided to make a new London bus to succeed that grand old favourite, the No. 291 double-decker, we contacted London Transport and asked them for details of the most used bus in the capital. They were most helpful and co-operative and offered us full advice on the choice of model. Not only is the Routemaster now the standard vehicle in London, but is likely to continue as such for some considerable time.

In real-life, the Routemaster was designed and developed by London Transport's engineers in association with AEC Ltd, and Park Royal Vehicles Ltd. The engine is a standard AEC 9,636 cc capacity unit, which develops 125 bhp at 1,800 rpm. For London Transport purposes it has been derated to give 115 bhp and has been modified slightly to suit the special requirements of the vehicle. Fully automatic transmission, actuated by a five-position gear selector lever, is used. The automatic gear control is fitted to give control over the second, third and fourth gears, the first and reverse gears being selected manually by the above lever. If the lever is placed in either second or third, then that gear is engaged and remains engaged until the lever is moved, but on placing the lever in fourth, the full automatic characteristics are brought into play and gear-changing up or down, between second and fourth, is automatic, depending on speed and load.

Inside, the bus is designed to carry 64 seated passengers, 28 in the lower saloon and 36 in the upper. Both saloons have an efficient heating and ventilating system to ensure maximum comfort for passengers who have been constantly in the minds of the designers.

Dealers who specialise in MECCANO spare parts

This is the first part of a list of dealers who handle full ranges of Meccano Spare Parts, published at the request of many readers. It is supplementary to the page of advertisements of Meccano spare parts specialists on page 33. Names are arranged by counties with entries in alphabetical order of town. The remainder of this list will appear in the July and August issues.

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K. EAMES, 341 Hitchin Rd., Round Green, Luton.
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G. A. WILD & SONS, 14 Manchester St., Luton.

Berkshire

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A. G. COOPER, 2 Bridge Rd., Maidenhead.
CURRYS LTD., 4/5 West St., Reading.
FORTESCUE BROS., West St., Reading.
READING MODEL SUPPLIES, 1 Hosier St., Reading.
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J. LITTON, 89 High St., Chesham.
MURRAYS LTD., 27 White Hart St., High Wycombe.
JANE ANN, 36 West St., Marlow.
F. L. FRIDAY, Corner House, 18 High St., Newport Pagnell.
ADCOCK & PERCIVAL LTD., Market Square, Princes Risborough.
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R. J. SAUNDERS, Winslow Cycle Works, 36 High St., Winslow.

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RENBRO MODEL DEPT., Mill Rd., Cambridge.
JOSHUA TAYLOR & CO., Sidney St., Cambridge.
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J. WARD & SONS LTD., 24 Chesterton Rd., Cambridge.
J. WARD & SONS LTD., 29/32 East Rd., Cambridge.
H. FITCH & SONS LTD., 16 High St., Chatteris.
CURRYS LTD., 15/17 High St., Ely.
K. A. TRINDER, Post Office, High St., Soham.

Cheshire

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LEIGH & CO., 31 Station Rd., Ellesmere Port.
HEWITTS, 25/27 King St., Knutsford.
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HINDE'S, 127 Welsh Row, Nantwich.
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W. G. HOOK, 55 Westgate St., Gloucester.
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YOUNGSTERS LTD., 323 Two Mile Hill, Kingswood, Nr. Bristol.
BATEMANS SPORTS CO. LTD., Kendrick St., Stroud.
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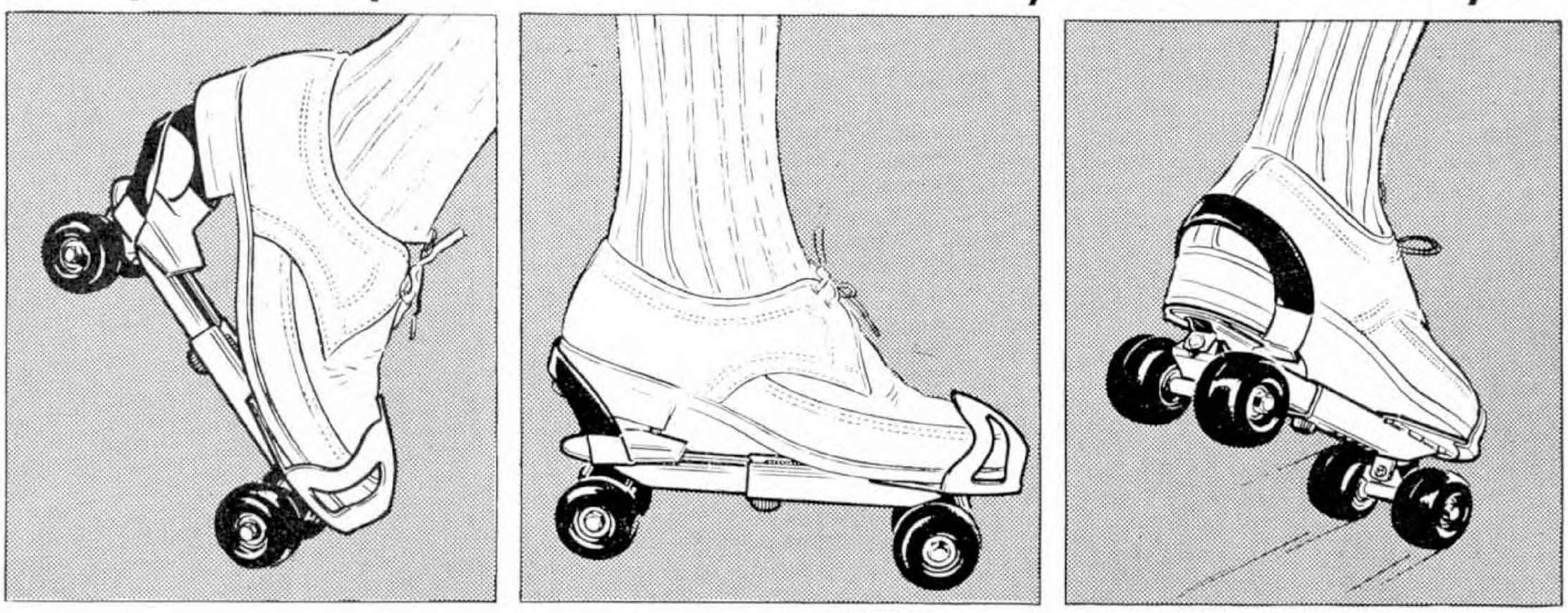
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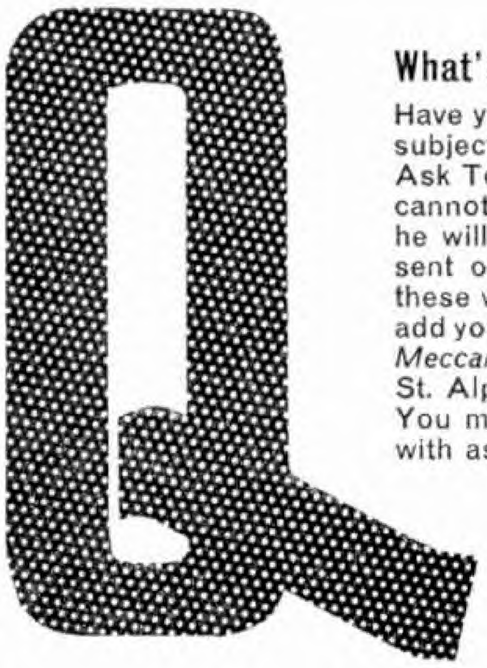
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and answer

Water, water everywhere

Q. *How much water do we use every day?—S. T. Moore, Ludlow.*
A. About 2,300 million gallons, or 50 gallons each. And each one of us uses daily six pints more every year, which is why the 470 water undertakings in England and Wales are looking for new sources of supply. The average yearly rainfall is 36·5 in, and one inch of rain gives us nearly 14,500,000 gallons for every square mile, so that we can hardly go short of water. But we actually collect and use only one out of every 40 gallons of rain that falls; the rest, at the moment, is lost to us.

Wartime miracle

Q. *How many men were involved in the evacuation of Dunkirk during the last war?—'Corporal', Northallerton.*
A. Over 211,500 men and 13,000 casualties of the British Expeditionary Force, and another 112,500 Allied troops—mostly French—were rescued from the Dunkirk beaches by the fleet of 'little ships' which crossed the Channel between May 26 and June 2, 1940. A book by John Masefield describing the operation called it *The Nine Days' Wonder*. Sir (then Mr.) Winston Churchill described it as 'a miracle of deliverance achieved by valour, by perfect discipline . . . and resource'.

Silent sound

Q. *Is it true that mice don't like television?—H. W. W., Roehampton.*
A. It has been observed that mice don't care to live near a TV set because one of its components emits a sound inaudible to us but unpleasant to them. Similarly, cats and dogs are upset by certain ultra-sonic sounds.
These discoveries have led to recent experiments aimed at repelling insect and other pests which are susceptible to sounds—or, rather, frequencies—which can be produced electronically. By reproducing their mating calls, locusts have been lured to their deaths by British researchers. An American scientist was able to duplicate the sound made by a male grasshopper to keep other grasshoppers at bay, and so clear small areas of these insects. And a Canadian entomologist who analysed squeaks made by bats has kept moths away from wheat by reproducing the sound mechanically.

Star-counter

Q. *If there are millions of stars in the universe, how do we manage to count them?—'Stargazer', Blackpool.*
A. There are something like 100,000 million stars in a galaxy, and about as many galaxies are visible to us through the telescope. Comparing the brightness of different stars and measuring their positions is a tedious business done by careful examination of photographic plates exposed by observatories all over the world. A plate 10 in square may contain up to 100,000 stars.
Just now, in Edinburgh, a machine is being built for Scotland's Royal Observatory which will be able to count 10,000 stars on a plate 4 in square, note their positions and measure their brightness—all in an eight-hour day. The information it gathers will be fed into a 'memory machine' for further reference. It will take over two years to complete, but it will greatly speed up the process of securing more knowledge of the universe, which is becoming increasingly important in other fields of research.

First spaceman

Q. *How old is the idea of space-travel?—'Astro-nut', Stockport.*
A. In literature, it goes back at least to the 2nd century and the writer Lucian. But the famous French swordsman Cyrano de Bergerac was the first to consider the possibilities of rockets, or 'fireworks', as a means of propelling a vessel through space, In his *Voyages to the Moon and the Sun*, written just over 300 years ago, he also played with such cranky notions as bottles of dew (which would be sucked up by the sun) attached to his belt, bowls of crystal, and magnetic loadstone. Earlier literary space-voyagers had relied on birds, artificial wings and even departed spirits to carry them.

In a circle

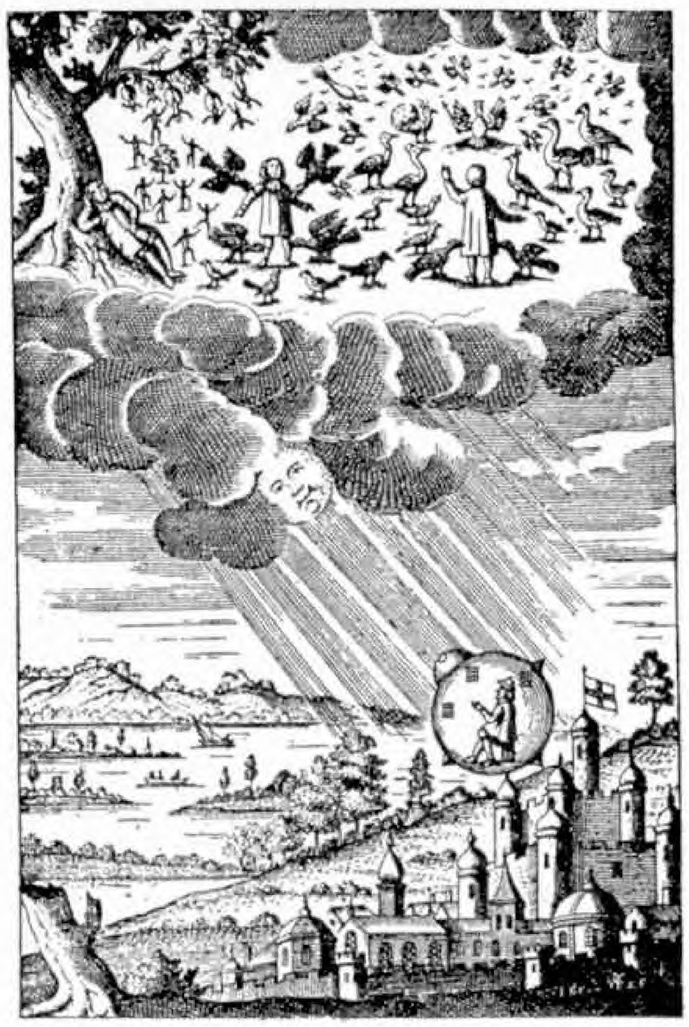
Q. *Is it a fact that people who get lost in a fog or a blinding snowstorm go round in circles?—E. T. D., Plumstead.*
A. Yes, The explanation is that, since the body is not quite symmetrical and the legs are not equally powerful, it is impossible to walk even a short distance in a straight line without seeing where you are going. Try walking down a long hallway, blindfolded, without touching the wall on either side!

Making money

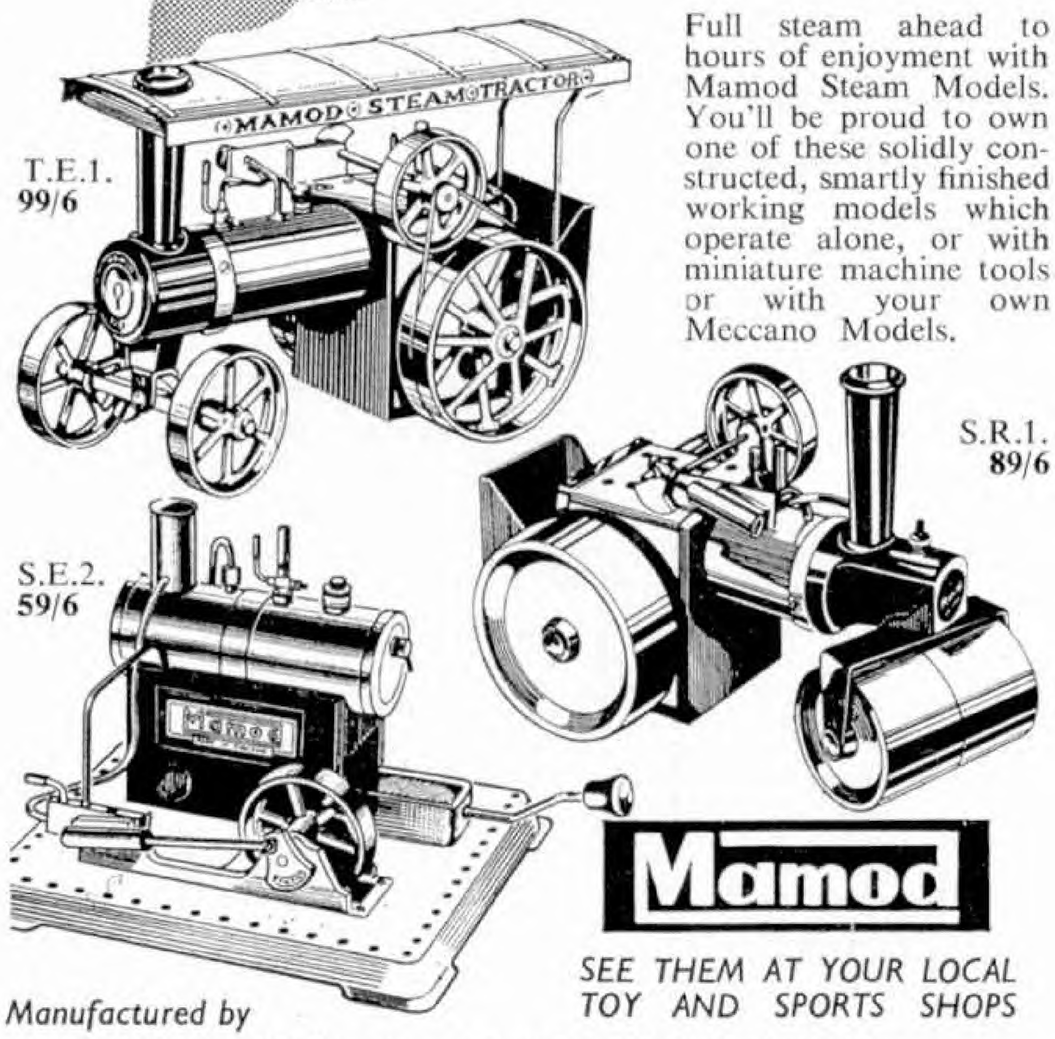
Q. *When were British coins first made by machines?—G. J. K., Devizes.*
A. Though screw presses and machines for drawing metal were known in Italy in the 15th century, mechanical methods of coining were not introduced in this country until 1662. Previously, coins were struck with a hammer. The first motive power was provided by horses. Today, coins are produced at the Mint at the rate of 120 a minute. In 1962, 774,000,000 were struck.

Top: John Mills in the film Dunkirk
Bottom: Cyrano's voyage to the sun





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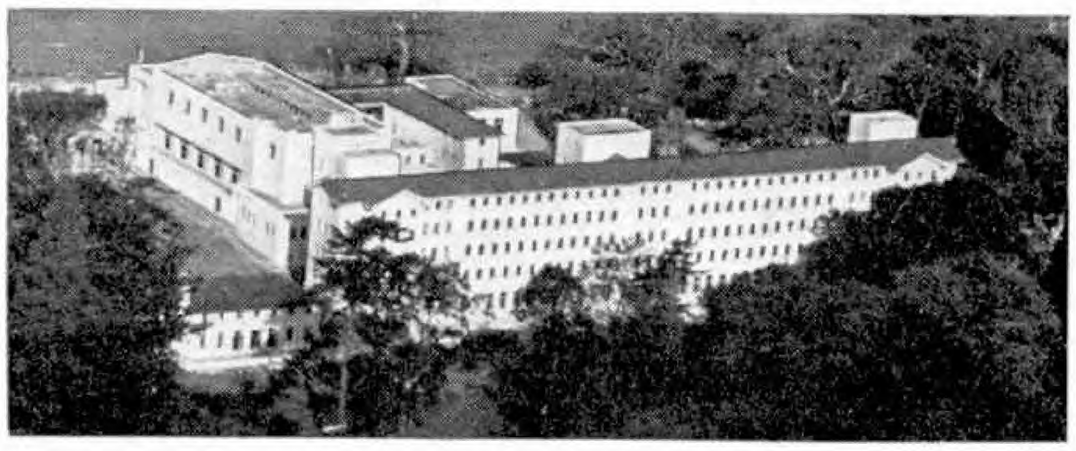
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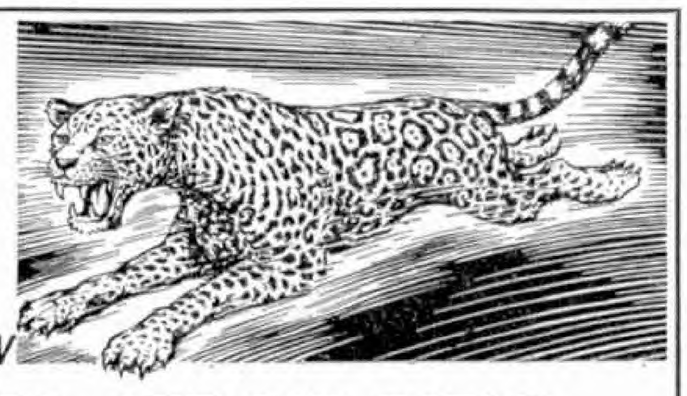
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Classified Advertisements cont'd. from page 46.

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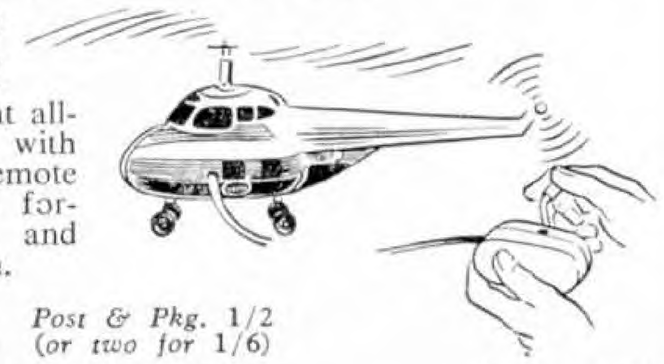
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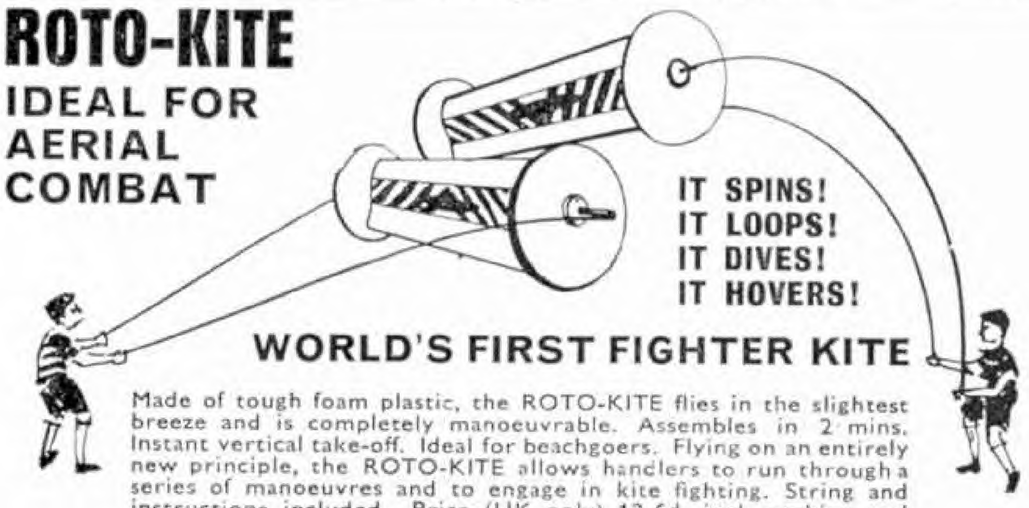


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STAMPS

Change of name

A MONTH or two ago, I wrote about Nyasaland, the Central African country, which, having gained its independence, was once more issuing its own stamps. I mentioned in those notes that the revenue stamps which had been overprinted for postal use would be replaced by a new definitive issue of pictorials. And an attractive set it proved to be. Have you got one? If you haven't, then you had better hurry, for as the name of the country is to be changed from Nyasaland to Malawi, so the stamps are to be changed also. The same designs will be used, more or less, but the country's new title will be incorporated. I am mentioning this because not only have the short-lived overprinted stamps gone up quite a bit in price, but the Nyasaland pictorials will also increase in value once the change is effective; so smart's the word if you want a nice set of stamps (or even a set to a shilling, if a complete one is more than you wish to spend). Bought today, it will later prove a big bargain. (1)

Slogan postal cancellations

What are you doing about these? Do many come your way? If they do, then they are really worth collecting. They are easy to come by, and do not look at all bad if they are cut neatly (oblong) and mounted with care. There are scores in existence, and I believe that a catalogue has been published about them. But you can get on quite well with just a pair of scissors and a packet of stamps mounts, affixing a mount at each end and pressing the slogan cutting down, as you would a large postage stamp. In the past, stamp collectors have not been very partial to these items, for, on their used stamps, they like to see a nice circular postmark. A slogan cancellation has meant that, generally, they simply got a number of straight lines, etc. instead. However, a number of collectors, from time to time, asked the Post Office to put the circular postmark to the right of the slogan, instead of the left, and some of the newer ones have been changed in this way. This leaves everybody happy. So just see what you can pick-up. They should not cost anything, and they are something well worth collecting, parcularly if you get a good lot together. Actually, I have a feeling that now many are being brought into use, they may have quite an interesting future. (2)

'G' stamps end

Some time ago, I saw a most interesting little collection of Canadian official stamps. There were stamps perforated OHMS, followed by others with the same letters overprinted. Finally, there were the 'G' overprints. Alas, there will be no more of the last-named for the various Canadian Government departments will not longer use them but will employ, instead, the bulk prepayment method. Envelopes will be used (as our own Government departments use them) with the words 'Canada Postage Paid' printed in the top right corner. Canadian stamps are very popular in the rest of the British Commonwealth as well as in the U.S.A. and, of course, official stamps have enjoyed much of that popularity, so the passing of the 'G' stamps will be regretted by many. Pity, but I suppose from a business point of view they were rather out of date. The new system (for Canada) will be much better. Also, I don't suppose that in an efficient country like Canada there were many leakages on official stamps. But, take my word for it, plenty of that is going on in some of the other countries which still use official stamps, which is why they can be obtained so cheaply.

Jet v geese

March 11 was the date for the replacement of the Canadian 7c stamp depicting geese for one showing a jet taking off from Ottawa's International Air Port. No, this is not a victory for the aeroplane, but just a normal change of a design which is now no longer needed. As the Canadian Post Office has explained, it is not usual to maintain in use two definitive stamps portraying similar subjects, and unless the 7c was changed, there would be two showing geese, for, as readers will remember, last autumn a new 15c stamp, depicting geese, replaced the 'gannet' stamp of the same face value. Collectors will be sorry, nevertheless, to see the old stamp go. Fortunately they will be able to obtain mint copies for some time yet, as the Philatelic Bureau in Ottawa will hold a stock for the time being. (3)

The tip of the month

New constitutions for the various members of the British Commonwealth, mean, in most cases, new stamps, or existing issues overprinted to mark such changes. To say it with stamps is a very popular trend in these days. One such change which is well known was connected with the Bahamas and the then current issue was, at it will be remembered, overprinted New Constitution 1964. The overprinted stamps appeared on January 7. Now, these will only have a run of six months, or even less if the printing is sold out before then. So if you have not yet bought your set, don't wait any longer, for so popular with collectors are Bahamas stamps in general that in time this overprinted set will certainly go up in price. And what about the stamps before they were overprinted. Will they come back when the overprints are finished? Don't worry about that, if you have a set, for if they do return it will be on paper with the St. Edward's Crown watermark, which is the paper used for the printing subsequently overprinted. It is such changes that make 'QEII' stamps increasingly popular, not only in the Commonwealth itself but in countries like the USA. One proof of this is the growing demand for the Commonwealth QEII Catalogue, which is devoted exclusively to the stamps of the present reign, and the 'Two Reigns' Catalogues, which also includes issues of the KGVI period. (4)

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WANTS

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• "M.M.s" for June, September, October, November and December 1924. Geared Roller Bearing, and any other obsolete parts. Forster, 144 Malvern Road, Billingham-on-Tees, Co. Durham.

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• Tricks, Jokes, Novelties, Masks, Wigs, Beards, etc. Send 6d. stamp for Free Catalogue. Wrathbaron & Co. (Dept. M.1), Ravenshill, Sutton, Keighley, Yorks.

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Continued on page 44

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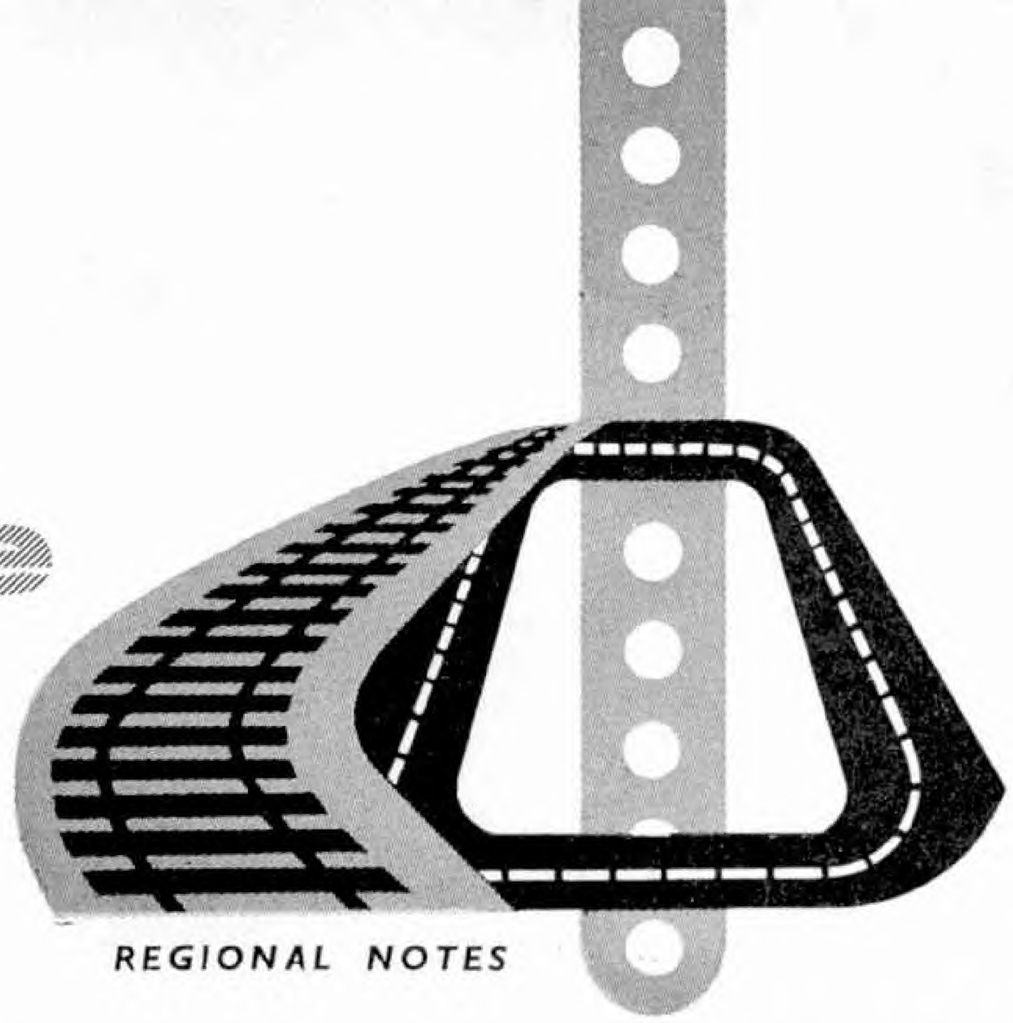
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Around the SOCIETIES



REGIONAL NOTES

Shebbear College Meccano Club

MEMBERS OF the club have built an oval overhead railway with a train operated by a clockwork motor. The model itself is very successful and building it proved to be an enjoyable pastime. Members are now at work on a model of the Tower Bridge and at the time of writing have completed two sturdy towers. Leader, Mr. H. C. Parr, Shebbear College, Beaworthy, North Devon; Secretary, Mr. R. J. Kent. The club has had a maximum attendance at recent meetings.

Gindiri Secondary School MC

THE CLUB is operating this year with entirely new members who are divided into four groups. One group works on a railway section, while the three others are at present engaged on one or other of the following models—an acrobat, a monoplane and a scooter. Leader, Mr. P. F. Bradford, Gindiri Secondary School, Northern Nigeria; Secretary, Daniel Babalola.

St John's (NZ) Meccano Club

THE CLUB opened the current year with meetings on February 7 and 21. At the first meeting three new members were welcomed and there was a good number of models to start the year with. Two teams were chosen and the library was opened. At the second meeting the president gave a talk on his trip to Auckland on the New Zealand Chess Championship. It was decided that ideas for models should be given a week before each meeting. Leader, Mr. R. S. Parr of 22 Mardale Street, Waikori; Secretary, R. Craigie. There was an average attendance of 15 out of 16 members at the meetings mentioned.

Gindiri Secondary School HRC

AS IN the case of the Meccano Club, the Hornby Railway Company branch at Gindiri has entirely new members. They are working hard on their layout. During club periods many members devote their time to renovating wagons and locomotives. Leader, Mr. P. F. Bradford; Secretary, Daniel Babalola. Both the Branch and the Meccano Club have had an average attendance of 95 per cent at recent meetings.

Kirkby Stephen GS HRC

MEMBERS HAVE been busy at work on their layout. They were presented with two solid tables to form the baseboard and these were linked together to give a large area for the layout itself. The track plan itself, formed after more than eight years' experience with Hornby-Dublo Three-Rail, has been rigidly adhered to from the beginning. The bridge which will link two sections of the layout is expected to be the most difficult building task facing the members. At the time this report was written the main station had been laid, and a branch line, but scenic work had not been commenced.

The club has had little difficulty in recruiting members—in fact the membership now stands at 47, almost one quarter of the total complement of the boys in the school, but this has created some difficulties since the club room is now rather cramped. Part of the problem, however, has been solved by splitting the club first into four and now into six teams. A Southern Electric motor unit is performing very satisfactorily after some small teething troubles. Most of the scenic work and buildings will be erected from commercial products and kits. The age group of the club is 12-14, and the boys have shown considerable enthusiasm. Not one of them has left the club since it started.

Several members have built and painted plastic kits for lineside accessories and signal boxes, and have greatly enjoyed their tasks. They have also built a modernistic goods shed from a plastic kit and are now keen to get on with the scenery. All rolling stock and locomotives brought in by members of the club are Hornby-Dublo, and the boys seem to get maximum satisfaction when they see their own equipment running on the layout. Leader, David W. Ellwood.

The Southern Society

THE FORTHCOMING programme is as follows: June 12, a visit to Chiselhurst route-setting signal box; 27, a day trip to France, using the no-passport facility; July 6, a talk by the Curator of the Clapham Museum of British Transport; 11, a visit to Eastleigh-Bournemouth-Weymouth Motive Power Depots; 26, a visit to the Tramway Museum at Crich; September 5, a visit to Salisbury-Templecombe-Yeovil-Exeter Motive Power Depots. A visit is also arranged to four depots on the former LSWR main line; October 17, a talk about the complex group of lines in the East Grinstead-Tunbridge Wells area; November 21, (morning) a visit to the works of, and a trip on the Waterloo and City Line: (afternoon) a visit to Waterloo and London Bridge Signal Box; December 5, a visit to Eastleigh Motive Power Depot and Works.

Meetings are held on the first Monday in the month at the Ambulance Room,

opposite No. 2 Platform at Victoria Station, London, and on second, third and fourth Mondays of the month at the society's headquarters at Platform 4, Streatham Common Station.

The Gauge 'O' Guild

THE SUMMER meeting of the Gauge 'O' Guild has been arranged in conjunction with the Leicester Model Railway Group, and will take place on June 13 in the Trade Hall, Leicester. Doors will open at 12.30 pm and close at 6 pm. Two halls will be available, a small one for use of guild members, and a larger one for the get-together with the Leicester Group members. A display stand will be available. It is hoped that as many guild members as possible will attend so that this event will be even more successful than last year's summer meeting. All details from the Hon. Secretary, Mr. H. F. Bower, A.C.I.S. of 81 The Drive, Bexley, Kent.

Norwood Model Railway Club

THE FOLLOWING additions to the usual programme of layout construction and track running nights have been arranged; June 9, photographic competition, followed by a talk on railway photography; 23, display of members' new models; July 7, colour slides show; 28, short talks by members on current projects. Further filming is being carried out during the summer months, to lengthen and improve the Club's film 'The Norwood Clubman'. Layouts are being built in O, OO, HO and TT gauges. Anyone who has had previous constructional experience in TT gauge would be especially welcome to assist in the building of the layout of that gauge. Meetings are held every Tuesday evening in the club's headquarters in the Crypt of St. Luke's Church, West Norwood, S.E.27. Full details may be obtained from the Hon. Secretary, Mr. L. Bramma Smith, of 40 Harrow Road, Carshalton, Surrey.

London Railway Preservation Society

THE LONDON Railway Preservation Society now has two steam locomotives which are to be maintained in working order. The ex-Metropolitan Railway 0-4-4T (London Transport No. L44) which was built in 1898, is now situated at Luton. One of the famous 'Beattie' 2-4-0 Well-Tanks, No. 30585, which dates from 1874, is now situated at Bishops Stortford, Herts.

The ultimate aim of the society is to acquire and run a short length of branchline where existing old locomotives, rolling stock, and early railway equipment can be displayed in operation. In order to build up a comprehensive collection, financial support and many more members are urgently needed. Donations and requests for information and leaflets should be sent to the Hon. Secretary, LRPS, 8 High Stile, Dunmow, Essex.

Leyton Model Railway Club

THIS CLUB is always willing to welcome visitors to its many talks and film shows and to its track nights, held every Tuesday and Friday, starting at 7 o'clock. Further details about the club will appear from time to time in this column. All interested in joining should contact the Hon. Secretary, Mr. K. Tait, of 49 Park Grove Road, Leytonstone, London, E.11.

The Model Railway Club

CLUB FIXTURES for June 1964 are: June 4, track night (London, North Eastern Group); 11, track night (Southern Group); 18, lecture—modelling old locomotives by G. Della-Gana; 27, Garden meeting. Please address all inquiries to the Hon. Secretary, Mr. D. A. Boreham, of 135 Mandeville Road, Northolt, Middlesex.

Britain's biggest Model Railway Club show by Michael Rickett

CENTREPIECE OF THE Model Railway Club's 1964 exhibition in London, was the OO layout owned and built by members of the Model Railway Club itself. The exhibition extended over two halls and a room at Central Hall, Westminster, and included model railways of all kinds, static exhibits, and trade stands from many of the manufacturers. The exhibit from the Model Railway Club was called the Longridge, Brampton Sands and Calshot Railway, and was built to show two distinct stretches of typically English main line—one GWR and rural, the other LSWR and more townish. The layout also has a tramway and a narrow gauge railway. The aim of the layout's operators during the exhibition was to run trains continuously in a sequence, This required a great deal of intensive operation.

At the other end of the scale was the steam passenger-carrying track in the centre of the lower hall which carried small children, free of charge, to the other end of the hall and back. The steam engines were coal-fired, and were the result of several years' work by various members of the Model Railway Club, the Society of Model Engineers, and the Eltham and District Locomotive Society.

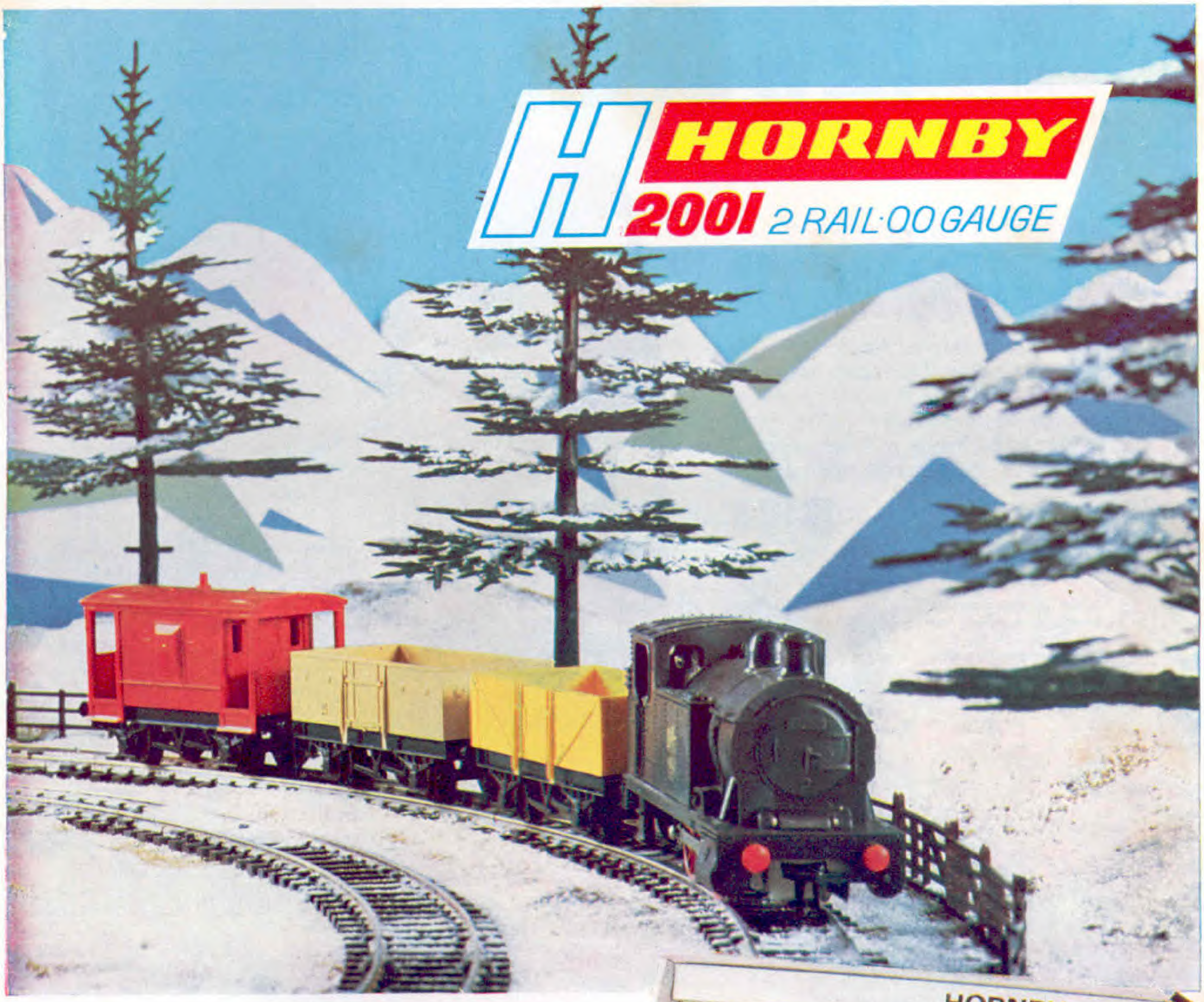
Many visiting societies contributed stands of models to the exhibition, and among these was the Croydon Model Railway Club on whose stand I noticed a beautifully-painted Isle of Wight 'Terrier' Class locomotive. The Orpington MRC's stand displayed many static models of great merit, among them an American HO scale 4-4-0 of 1910 vintage. Much expert workmanship must have gone into its construction. The Norwood Model Railway Club displayed among other things an exact reproduction of a German station in HO scale. The many colours, and the breathtaking finish of the model, certainly lived up to the club's reputation for modelling skill.

THE MRC locomotive stand was filled to capacity with models of locomotives both ancient and modern. Among the old locos was a London Railway 4-4-0 tank, built to 7 mm scale by A. P. Hancox. The stand contained a varied selection of models including a Caledonian Railway 4-6-0 No. 903 by W. J. Banwell, and a Midland Railway 4-6-4 tank—a rather unusual locomotive to be seen in model form—by J. F. Briant. Three locomotives worthy of mention were a Blaenau and Ffestiniog 0-4-2 tank, a Lynton and Barnstaple 2-6-2 tank, and a Ffestiniog 0-4-0 S.T.

For the second time running, 'Borchester Town Station' was on view at the exhibition, and was operated in a most realistic way. The layout is cleverly built to fit in the comparatively small space of 10 ft by 6 ft and is packed with railwaylike detail. To run it to the full timetable five operators are needed and its popularity can be gauged from the fact that there was often a crowd five deep all round it.

One of the most popular model railways at the show was the Ffarquhar Branch, built by the Rev. W. Audrey.

The 61 stands at the exhibition provided hours of fascination for many thousands of people, and the working demonstrations of how to construct locomotives, buildings and other railway items must have been of great value of many enthusiasts. The Model Railway Club deserves congratulations for an exhibition of a very high standard.



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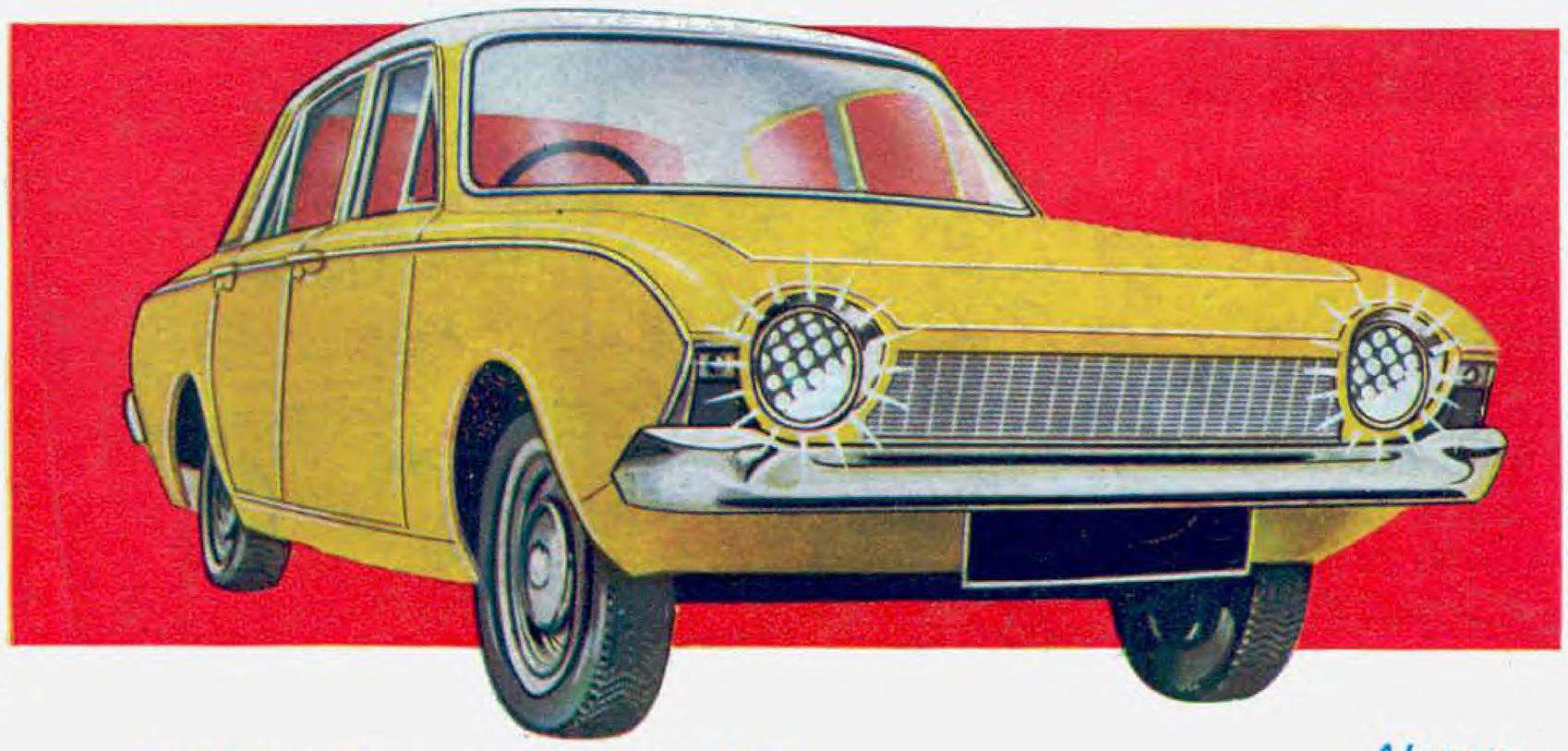
MODEL 289. LENGTH 4¾" **8/11**



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